Public Utilities

Volume 56 No. 9 October 27, 1955

Oct 27, 1955 Pg/Km 3

TVA SHOULD REMAIN UNDER THE CONTROL OF CONGRESS
By Louis V. Sutton

« »

Do Utilities Need Engineered Work Standards?
By James W. Taylor

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What Makes Company Public Relations Tick?
By Henry Obermeyer

« »

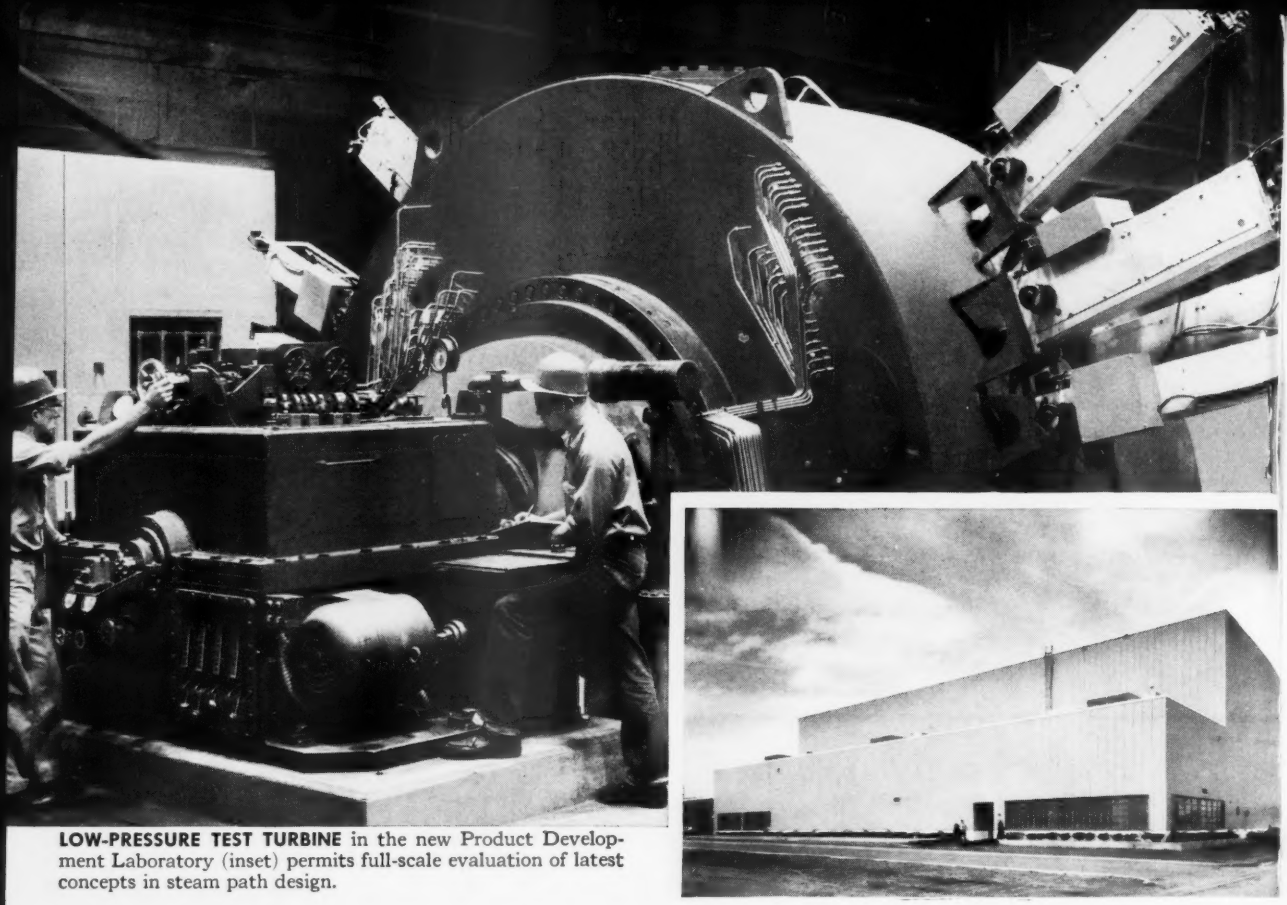
Joint Utility-Union University Course

Alternatives to Public Utility Regulation By Commissions

The Interstate Pipeline Company as Natural Gas Producer

The "Federal Power or None" Policy

XUM



LOW-PRESSURE TEST TURBINE in the new Product Development Laboratory (inset) permits full-scale evaluation of latest concepts in steam path design.

New turbine lab facilities ready to tackle the problems of nuclear power generation

The generation of low-pressure, low-temperature steam by nuclear power reactors re-focuses attention on the low-pressure section of steam turbines and the increased importance of efficient use of the energy in this region.

Present G-E low-pressure designs are basically suitable for application in nuclear power plants. Special problems, such as moisture removal to minimize later-stage erosion, need refinement.

The solution to such problems can be evaluated in the Turbine Development Laboratory's new full scale, low-pressure test turbine. The largest 3600-rpm steam parts built by General Electric can be run in this turbine under actual operating conditions.

Other special problems such as corrosion of the turbine parts and contamination by radioactive steam are being tackled in General Electric's other complete laboratory and testing facilities. These and many other G-E programs are keeping turbine development abreast of trends in reactor design.

From America's first commercial generation of electricity by nuclear energy (using a G-E turbine)* to working closely with various study groups, General Electric is helping to make atomic-electric power an economic reality in the shortest possible time. General Electric Company, Schenectady 5, N. Y. 254-33

*At West Milton, N. Y., July 18, 1955

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Public Utilities
FORTNIGHTLY

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The pictures below show significant steps in the shop fabrication and assembly of B&W's Universal Pressure Steam Generator for Philo Plant.

B&W Universal

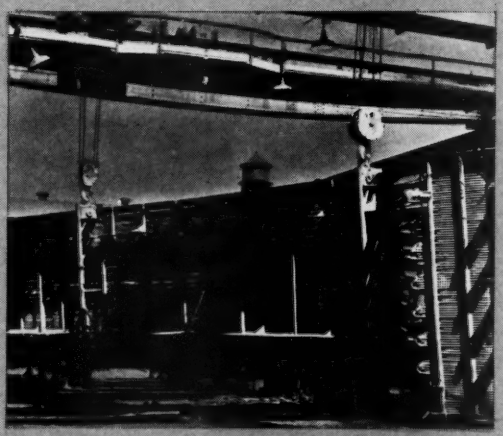
Assembly, complete and ready for shipment, of the second pass side wall is about 55 feet long, 5 feet, 6 inches wide. Alloy tubes are strength welded into the headers.

Floor tubes for secondary front wall assembly are carefully inspected for correct alignment.

An intricate job of bending, studding, and nesting characterizes the screen and floor for the secondary front wall.

Support castings being welded on flexible, small diameter tubes for roof assembly. Note that each tube end has a steel plug in it for cleanliness and future hydrostatic tests.

Shop assembly of secondary front wall. Note assembly frame which was made of plates and pipes welded together, but was not attached physically to the tube assembly at any point.



Secondary front wall section of alloy tubes and headers on its way to be completely stress relieved after assembly.

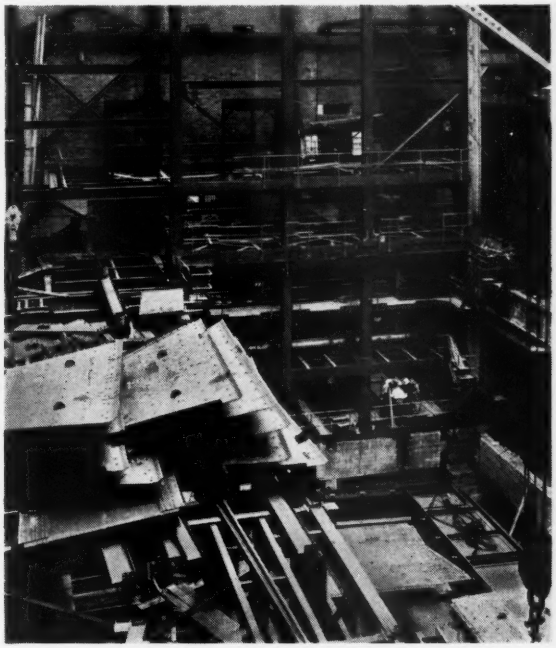
Pressure Steam Generator erection begins at Philo Plant

Final field erection has started on the world's first commercial supercritical pressure steam generator. At the Philo Plant of the Ohio Power Company, on the American Gas and Electric System, shop-assembled components of B&W's Universal Pressure Steam Generator are now being erected. It will supply steam at 4500 psi, 1150 F to a 125,000-kw turbine, and there will be two stages of reheat. Expected net heat rate is 8500 Btu per kilowatt hour.

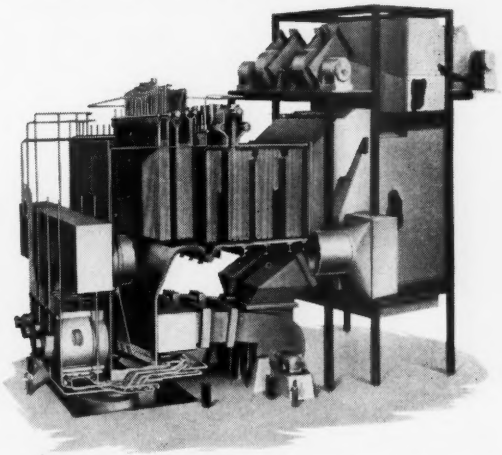
The complete installation at Philo Plant represents a new break-through in steam electric generating efficiency. In the words of Phillip Sporn, President of American Gas and Electric Service Corp.:

"The Philo project reflects the outstandingly dynamic character of the electric power industry. Here, in the very important field of energy generation, new frontiers are being pushed forward. Here, new avenues of approach to improvement in capital costs, in efficiency and in operating costs, are being opened. And, in keeping with the tradition that has characterized the growth and development of the industry, the results of this pioneering achievement will be made available to the rest of the industry.

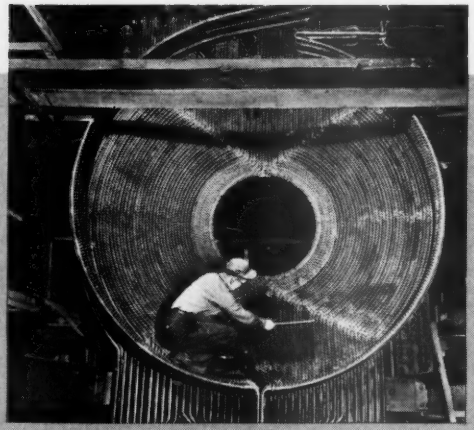
"The electric power industry, far from challenging any particular method of generating energy, demonstrates by this Philo project its readiness to adopt and bring forward every new development that can advance its technical and economic well being."



Start of boiler erection at Ohio Power Company's Philo Plant.



Sectional View of B&W Universal Pressure Steam Generator.



Assembly of Cyclone Furnace pressure parts. The unit for Philo Plant will have three such Furnaces.

G-730

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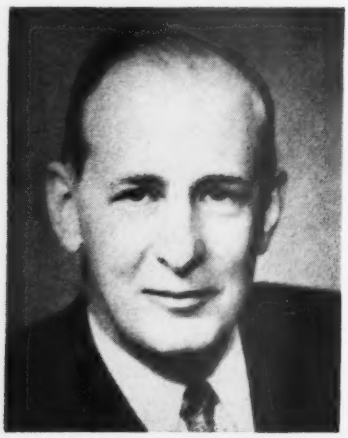
Pages with the Editors

WITH the prospects growing stronger for a wide-open political race at the next general election, the question of the future water power policy of the federal government seems more unsettled than ever. There had been hopes earlier this year that a co-ordinated policy of "partnership" development of our natural resources would gradually evolve and become consolidated under the firm leadership of President Eisenhower. That is still a distinct possibility, regardless of who might take over the controls of the ship of state after the next general election.

BUT the tendency in some quarters to treat the federal power policy itself as a major political issue, if not a political football, is not reassuring to those who would like to see the relationship between the federal and local governments, as well as private enterprise, settle down to a basis of mutual understanding.

THE Tennessee Valley Authority will doubtless become the focal point for a considerable amount of jockeying by some who have no more stake in the outcome than a personal political job-seeking advantage. Already the mayoralty election of Memphis appears to be turning on the question of whether that Tennessee city



LOUIS V. SUTTON

HENRY OBERMEYER

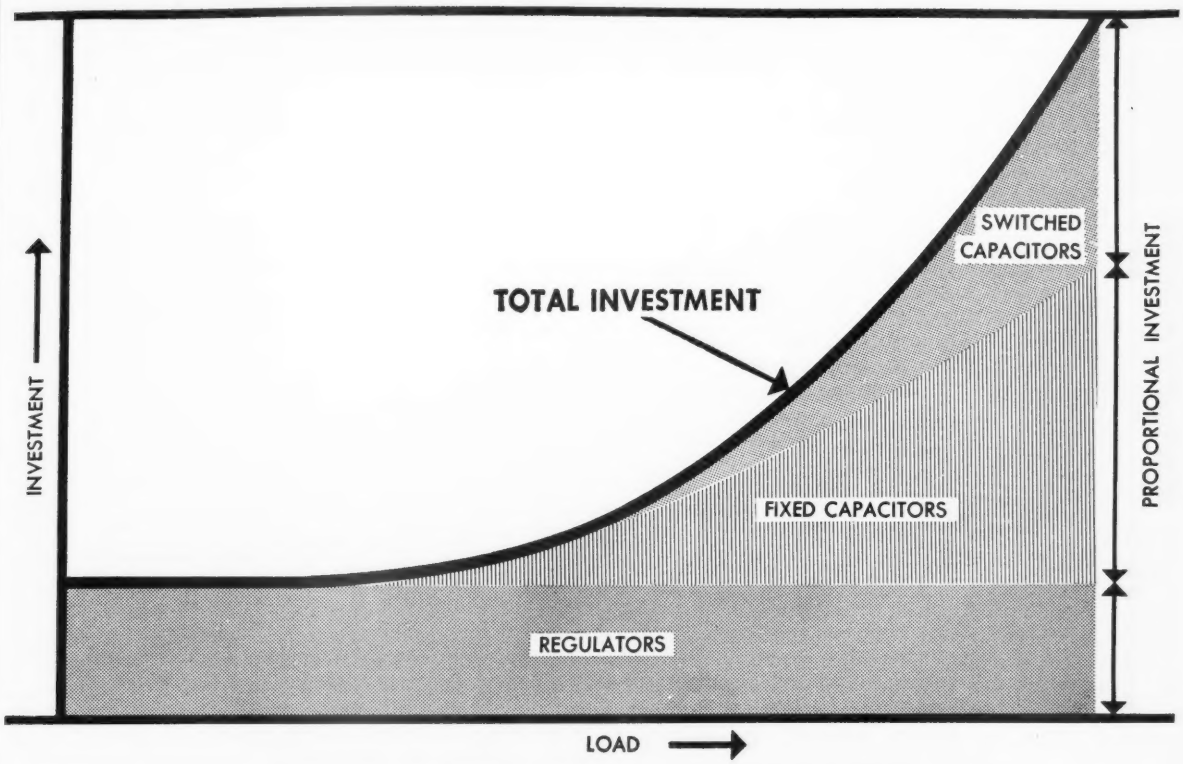
should honor its commitment, made to President Eisenhower, to build a large enough municipal plant to take care of the city's future needs. The death of the late Mayor Frank Tobey, who made this commitment (in return for dropping the controversial Dixon-Yates contract by the federal government) has complicated the outlook.

SOONER or later, and regardless of party politics, the federal government is going to have to face up to the basic question so well phrased by President Eisenhower months ago. Does the federal government have the unlimited responsibility of furnishing local area populations with cheap electricity any more than it has the responsibility of furnishing such citizens with cheap and unlimited water supply or clothing, food, or other essentials?

ONE of the most forthright attempts to put the federal government squarely into the business of providing local benefits on a permanent basis is the Kerr TVA bill, now pending before Congress. This bill proposes a new arrangement for perpetuating and enlarging the TVA system. But the Chamber of Commerce of the United States is opposed to this legis-

OPERATION VOLTAGE REPORT NO. 4

Key facts for the optimum investment for regulation



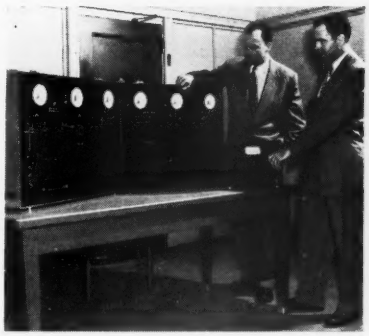
Conclusion; DEFER NEW LINE INVESTMENT BY USING REGULATORS *PLUS* CAPACITORS

It has been established by a comprehensive study of the voltage problem that a combination of regulators and capacitors does the best job of holding voltage . . . and at a lower cost, too. To utility planners, the results of this study are a guide to programmed expenditures for retaining desirable consumer voltages as loads increase.

A suggested program for equipment procurement is shown above. Ideally, an investment in feeder voltage regulators should predominate at light loads and hence these should be purchased initially. As more load is added, fixed capacitors should be utilized to increase load capability. Finally, at heavy loads, switched capacitors should be added along with more fixed units. The greater investment at these heavier loadings should be in such power-factor improving equipment.

Only when thermal limitations or excessive line losses appear, should it be necessary to rebuild the line. The result is that costly line reconstruction is delayed until absolutely necessary, and consumers continue to get good voltage.

This is the last in a series of reports designed to acquaint you with the results of Operation Voltage. For a complete discussion, contact your G-E Apparatus Sales Engineer or write for GER-1029. General Electric Company, Schenectady 5, N. Y. 645-4



Portable demonstrator being used by G-E engineers R. M. Butler and D. R. Samson to show effects of capacitors and regulators under variety of feeder load conditions.

GENERAL ELECTRIC

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lation as being simply an effort to change the label without correcting the infirmity of placing local area responsibilities on the federal taxpayer.

LOUIS V. SUTTON, president and chairman of the board of Carolina Power & Light Company, and a former member of the committee on natural resources of the Chamber of Commerce of the United States, who appeared as a spokesman for that organization before Congress, in the opening article in this issue gives us a clear-cut statement on this proposal that TVA be permitted to issue its own revenue bonds in order to construct power facilities for which funds have been denied by Congress. The author, in stating these views, represented not only his own industry but the federation of 3,000 business organizations which comprise the Chamber of Commerce of the United States.

A NATIVE of Richmond, Virginia, MR. SUTTON is an electrical engineering graduate of Virginia Polytechnic Institute (BS, '10). He started his apprenticeship with the General Electric Company in Lynn, Massachusetts, 1910-12. He then joined Carolina Power & Light, rising by successive promotion to become president and general manager in 1933.

* * * *

JAMES W. TAYLOR, whose article on engineered work standards for utilities appears on page 707, received his BS in management engineering at Carnegie Institute of Technology in Pittsburgh but looks back upon the North Dakota plains as "home." His earliest experience doing facilities planning in the standards department at General Motors' Allison division started his association with work measurement and standards. This was continued during a period in the headquarters production department of Westinghouse Electric Corporation in Pittsburgh, and later, in his work as supervisor of production control at the Westinghouse elevator division in Jersey City, New Jersey. He joined Booz, Allen & Hamilton in 1951 (of which he is now a partner) and has been associated with much of the firm's public utility business since that time.

JAMES W. TAYLOR

* * * *

HENRY OBERMEYER, whose article on utility public relations begins on page 715, is an alumnus of the Columbia University School of Journalism and of the late lamented *New York Sun*. He embarked on a career in public utilities with the securities department of Henry L. Doherty and Cities Service companies. He served a term as editor of the *American Gas Association Monthly* and then joined the old Consolidated Gas Company, which later merged with Consolidated Edison Company. MR. OBERMEYER was later appointed an assistant vice president and director of all system advertising and related operations.

HE has been active for many years in organized advertising. As president of the Public Utilities Advertising Association he initiated that organization's continuing survey of advertising and public relations expenditures. MR. OBERMEYER is now a vice president of Bozell & Jacobs, Inc., New York, where his principal assignment is that of co-ordinator of the electric companies' Public Information Program.

THE next number of this magazine will be out November 10th.

The Editors

...on the Calculator that Prints!

The Remington Rand Printing Calculator with its unique "printing memory key" really saves me the trouble of jotting figures on paper. It locks one number in the machine to remain constant, for repeated use with other figures in multiplication, subtraction and addition. A touch of the key clears the machine and I'm ready to work on a new problem.

and thank you so much...

for speeding up my work with the modern 10-key touch-method keyboard

for providing me with a printed record of figures on exclusive two-color Simpla-tape.

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Coming IN THE NEXT ISSUE

★

UNFAIR PRACTICES IN THE DISPOSAL OF ELECTRIC POWER

Last June the Hoover Commission made public a voluminous report of its Task Force on Water Resources and Power. Because of its comprehensive and thorough treatment and analysis of federal water power policies, as they have developed in recent years, the Task Force report in its full text is not likely to reach a very wide audience. Yet it is a most important document and its conclusions and recommendations are very influential on the future direction of federal policy in this increasingly vital field. Therefore this clear and simple analysis of the high lights of the Task Force report, together with some trenchant personal observations by the chairman of that Task Force, Admiral Ben Moreell, USN(Ret.), should provide a valuable contribution to a broader and better understanding of the stakes involved, as well as the problems ahead.

SHOULD UTILITIES INVEST IN THE UNIVERSITIES?

There is a new trend in American philanthropy. More and more, large corporations are establishing new funds to help colleges and universities. Public utilities as well as nonutility industries naturally have an interest in this movement for supporting our institutions of higher learning. K. P. Applegate, president, Hartford Electric Light Company, has written an account of the reasons why his company's board of directors unanimously voted to make a gift of stock to the Rensselaer Polytechnic Institute.

ZONING, UTILITIES, AND SWEET REASON

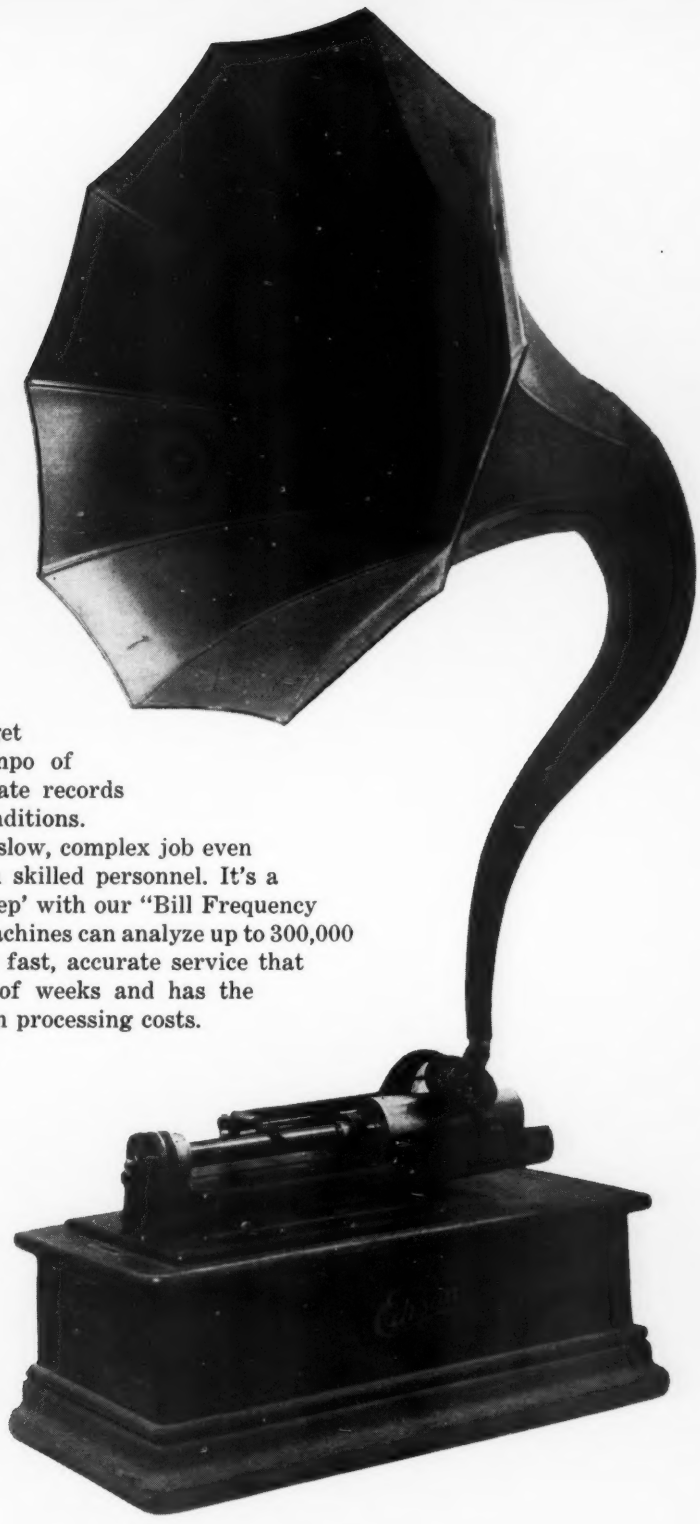
Last spring there appeared in PUBLIC UTILITIES FORTNIGHTLY an article proposing that public utilities should be relieved of some of the restrictions by local zoning boards with respect to the location of public utility facilities necessary for adequate public service. Last summer an opposite point of view was presented, suggesting that paramount authority should remain with the local authorities. Now comes an exponent of the middle ground. David K. Kadane, general counsel of the Long Island Lighting Company, who is cognizant and sympathetic with the problems and aspirations of both sides of this controversy. His article suggests a balanced solution in the over-all public interest.

★

Also . . . ***Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.***

Wind Instrument

It only played one record at a time, which had to be changed by hand and you had to wind it after every tune. This "music by muscle" machine was the marvel of its day but now it is a museum piece.



Hand compiled figures too often are "museum pieces" by the time you get them, they just can't meet the tempo of modern business that requires accurate records in a hurry to meet fast changing conditions. Case in point . . . rate analyses. It's a slow, complex job even when a utility company uses its own skilled personnel. It's a fast, simple job performed in 'One Step' with our "Bill Frequency Analyzer", because just one of these machines can analyze up to 300,000 bills in a *single* day. Investigate this fast, accurate service that gives you analyses in days instead of weeks and has the collateral benefit of saving you 50% in processing costs. *There is no obligation for estimates.*

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Remarkable Remarks

"There never was in the world two opinions alike."
—MONTAIGNE

GEORGE E. STRINGFELLOW
Representative, New Jersey state taxpayers.

"If the federal government really wants to help the states, it will balance its budget and reduce the debt load."

EDITORIAL STATEMENT
Los Angeles Times.

"Governments can help the great mass of a people only by leaving them alone. Our own labor politicians could find a moral in Argentina, but they won't."

GUY L. BROWN
Grand chief engineer, Brotherhood of Locomotive Engineers.

"We will not join [a single body of organized labor] because America must be able to expect security for independent expression, or lose every claim she has to freedom."

CLIFFORD F. HOOD
President, United States Steel Corporation.

"[Capital for industrial expansion] cannot be transferred from one pocket to another by a beneficent government. Capital must be produced [and] multiplied by competitive enterprise."

JAMES B. BLACK
Chairman of the board, Pacific Gas and Electric Company.

"Water, not power [is the problem in the West]. Those who have made the need for water a vehicle to promote government ownership and distribution of electric power seek to rule, not serve."

HOLMES ALEXANDER
Columnist, Los Angeles Times.

"The American businessman is still the community leader. And if your community sends surplus saps and subsidized tax eaters to Washington, you're getting just the kind of government you deserve."

FRANCIS K. MCCUNE
Vice president and general manager, atomic products division, General Electric Company.

"No broad free enterprise system can flourish or even exist, when there is not free exchange of information. The Geneva meeting points up the importance of providing access to atomic information across the board in industry."

WALKER L. CISLER
President, Atomic Industrial Forum, Inc.

"Common achievement binds friendship. Through broadening our own atomic energy development and sharing it with friendly people everywhere, we can realize our momentous opportunity and fulfill our most humane obligation."

WILLIAM HENRY CHAMBERLAIN
Columnist, The Wall Street Journal.

"*The Manchester Guardian,* sitting on the Liberal side line in an election fought between the two big mass parties, Conservative and Labor, offered a bit of sober advice to the defeated Laborites. The election result, the paper said, 'showed that this chatter about Labor needing a "Socialist" policy is nonsense. It does best with a moderate social reform policy and no nationalization adventures.'"

Why tie up your money in communications equipment?

When you let the Bell System furnish your communications, you enjoy three important advantages:

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3. ***You get the benefits of trained personnel, expert supervision, continuing analysis.***

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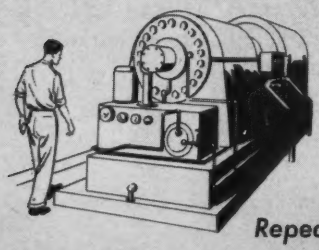
- of importance to Operating and Maintenance Engineers



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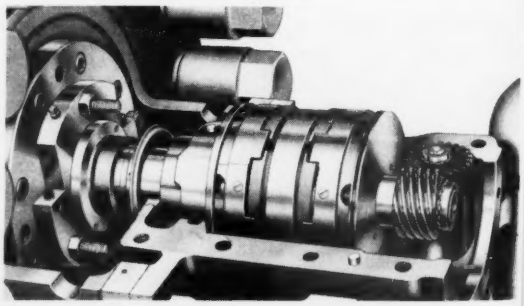

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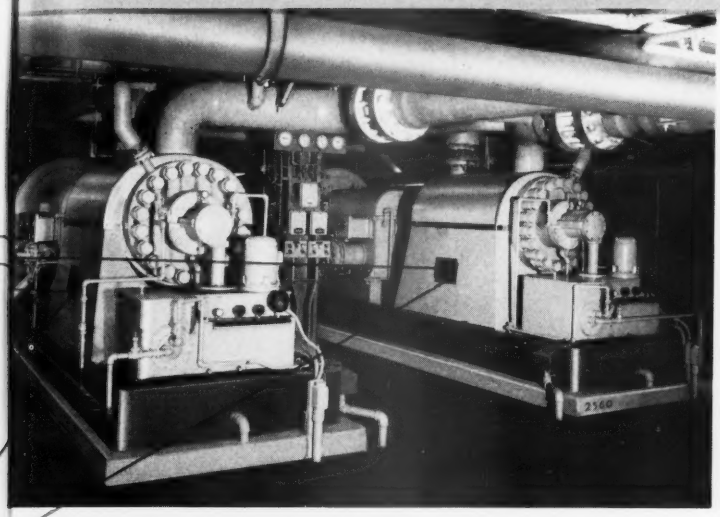

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From 1950 to the present time more than 600 boiler feed pumps have been installed by Pacific for feedwater temperatures to 450° F ... capacities to one-million pounds-per-hour with discharge pressures to 2990 psig.

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Precision workmanship is emphasized at every step from magniflux inspection of castings through boring ... turning ... grinding ... to dynamic balancing of rotating parts.

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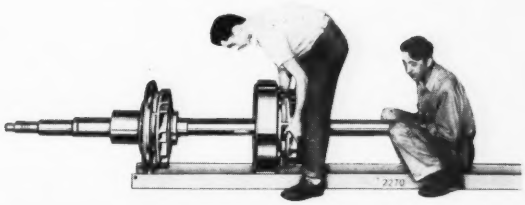

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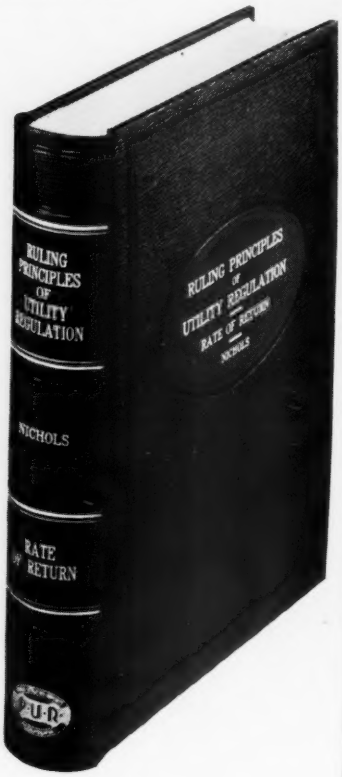
Announcing an authoritative treatise on

RATE OF RETURN

by Ellsworth Nichols

the book you've been waiting for

ONE of the most important subjects, if not ***the most important subject***, constantly confronting utility managements, regulatory commissions and others concerned, is ***the amount of return*** to be ***allowed public utility companies*** and ***how best to determine that return.*** After almost four years of research, study and analysis, Ellsworth Nichols, Editor of PUBLIC UTILITIES REPORTS, and author of "PUBLIC UTILITY SERVICE AND DISCRIMINATION" has completed his new volume, ***"Rate of Return."***



Throughout the work, emphasis is placed on the ***ruling principles of courts and commissions*** concerning the ***various factors*** to be ***considered***, the ***weight*** to ***be accorded such factors***, and ***illustrations*** of the ***application*** of the ***principles discussed.***

The volume contains 25 chapters, each dealing with an important phase of the subject—

Theory of Return in Rate Regulation
Confiscation
Right to Fair Return
Amount to be Allowed
Attraction of Capital
Comparable Earnings
Risk or Absence of Risk
Economic Conditions
Intercorporate Relations
Cost of Capital As a Factor
Principles Governing Capital Cost
Economic Conditions Affecting Capital Cost
Capital Costs of Related Companies
Capital Structure
Cost of Debt Capital
Cost of Preferred Stock Capital
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A G-E PROGRESS REPORT

ON THE RISING

TREND TO FLUORESCENT

More Progressive Cities Adopt Newest Street Lighting Source

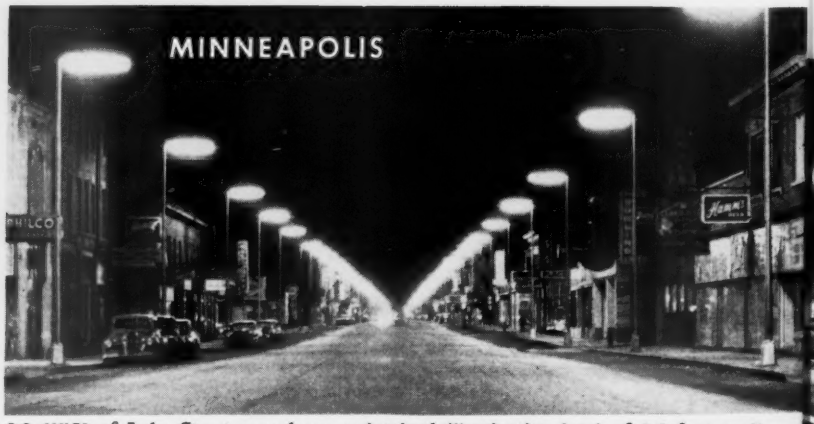
Five years ago General Electric introduced fluorescent street lighting to the United States. Today, thousands of these new luminaires are in service all over the nation. Fluorescent's growth rate is higher than that of any other outdoor lighting source.

What are the reasons for this unusually rapid growth?

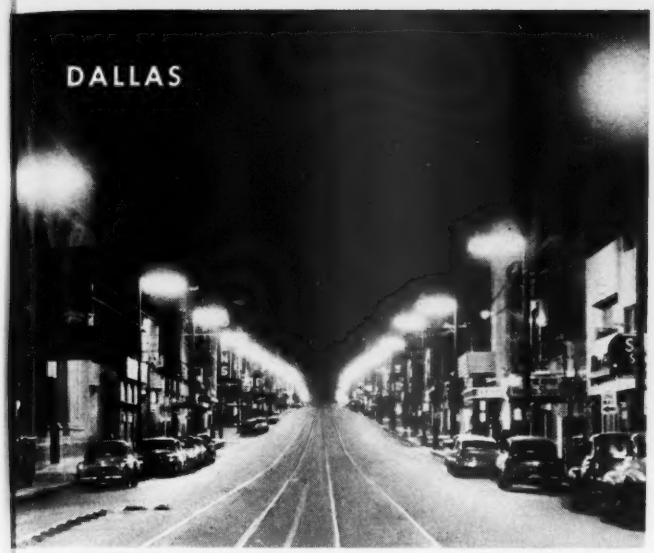
IMPROVED VISIBILITY

Doubtless the leading cause of fluorescent's rise to popularity is the great improvement in visibility which it brings about. Some lighting experts say that you see about one third better on a fluorescent-lighted street than on one illuminated to the same level by mercury or filament luminaires. This improvement

NATION'S LARGEST fluorescent street lighting installation is inspected by Minneapolis officials. Flanked by G-E sales manager John Pike and lighting specialist Ernest Wendling, Minneapolis aldermen Frank V. Moulton, George E. Johnson, Jr., and George W. Martens watch installation of Form 206 luminaire.



3.3 MILES of Lake Street now have maintained illumination level of 1.5 foot-candles from G-E fluorescents. 500 of these units have been placed in service in this important business area. Installation is part of city-wide lighting expansion program.



"RECEIVED ONLY FAVORABLE comments on the new lights" says J. W. Monk, Dallas public utilities supervisor. Travis Winter, Dallas P&L, worked with Mr. Monk in obtaining decision to install more than 300 fluorescents in downtown Dallas.

EXCEPTIONAL "SEE-ABILITY" characterizes Lexington Street, Baltimore, under its new General Electric fluorescent street lighting. City and Baltimore Gas and Electric Company are also progressively relighting other areas.

is due to (a) reduced luminaire brightness, (b) improved pavement brightness uniformity and (c) excellent color quality from the "cool white" fluorescent lamp.

PLEASANT, "COOL-WHITE" LIGHT

There's no distortion of colors from the "cool white" light of fluorescent lamps. People's complexions and clothes, familiar objects, etc., look the same under this comfortable light as under sunlight.

MODERN APPEARANCE

The distinctive lines, up-to-date design, and functional beauty of the General Electric Form 206 luminaire make it an asset to any street's appearance.

LOWER MAINTENANCE

The average effective life of a fluorescent street lighting lamp is about two years! The hinged plastic globe enclosing the lamps is shatterproof. Neither the globe nor the light output is unduly affected by sun, rain, heat, cold, dirt, or aging.

LOWER COST

Compared on the basis of judged equivalent visibility with either color-improved mercury or filament, the G-E Form 206 fluorescent luminaire costs less than these other systems! While fluorescent equipment and amortization costs usually are somewhat higher, installation costs are about the same and operating and maintenance costs are generally lower.

MORE INFORMATION?

You can get complete information on the Form 206 fluorescent luminaire from your nearest G-E Apparatus Sales Office, agent, or distributor. Or, write Section 452-161, Outdoor Lighting Dept., General Electric Co., 1400 Western Ave., West Lynn 3, Mass.

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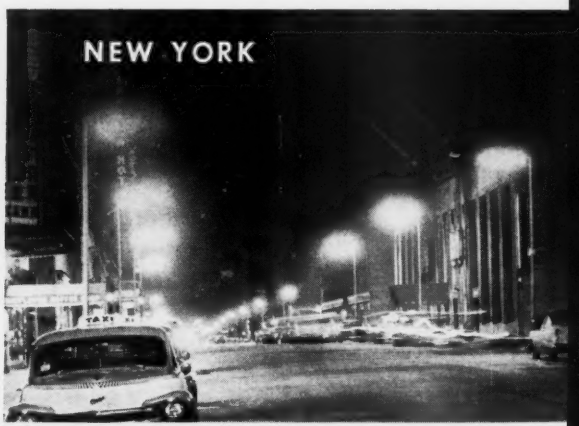
"ABSOLUTELY THE BEST" said S. Ivan Sandberg, of San Francisco's Department of Public Works, about the General Electric Form 206 luminaire. Intersection above is near famed Golden Gate Park.



"PAVEMENT GLARE IS REDUCED on Lexington Avenue during rainy or foggy weather" according to Armand D'Angelo, N. Y.'s Deputy Commissioner of Water Supply, Gas and Electricity.

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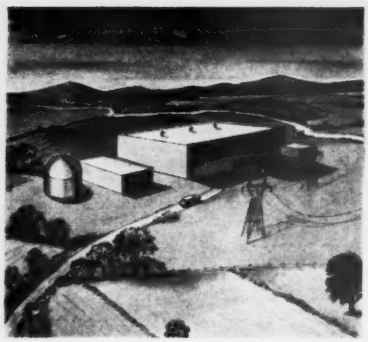

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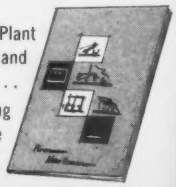

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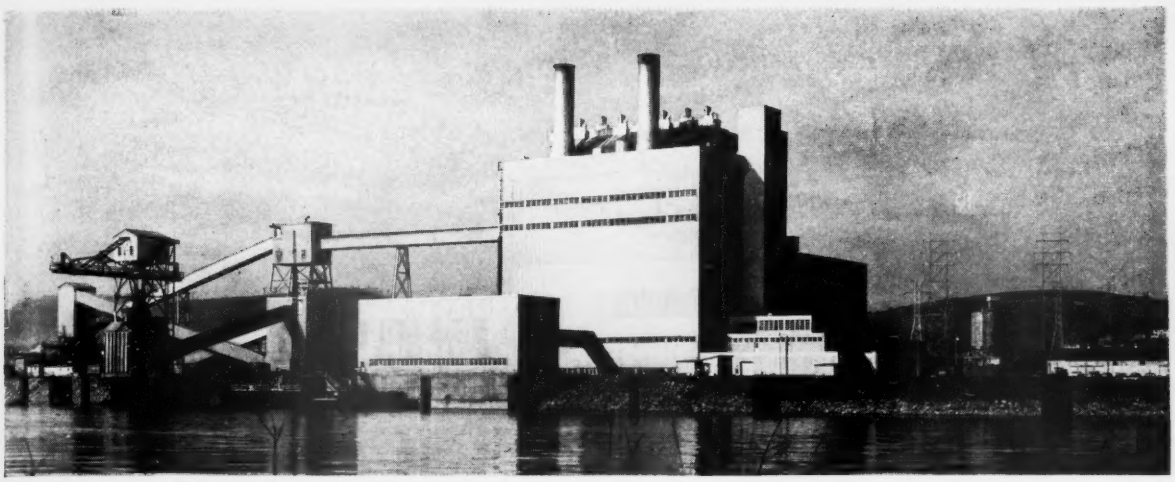
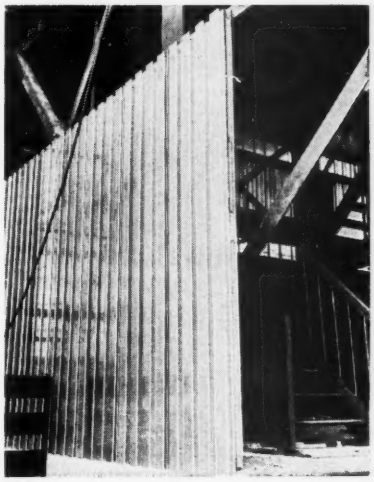


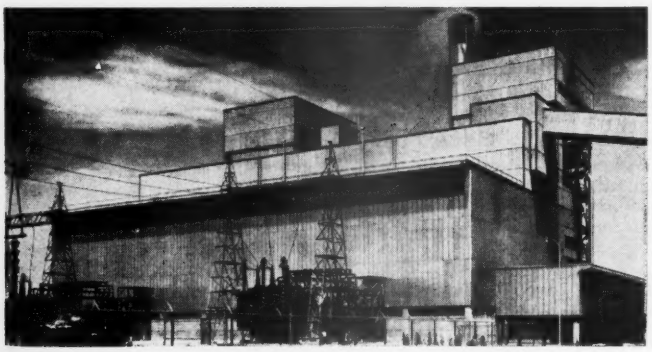
Q-Panel walls grace the new Elrama Power Plant (above) near Pittsburgh. It was designed by Duquesne Light Company's Engineering and Construction Department. The Dravo Corporation was General Contractor.

Why fine new power plants everywhere have Q-Panel Walls

Builders of new power plants in all parts of the country have specified Q-Panel walls for the following very good reasons: 1. Q-Panels are permanent, dry and noncombustible, yet may be demounted and re-erected elsewhere to keep pace with expansion programs. 2. Q-Panels are light in weight, thus reducing the cost of framing and foundations. 3. Q-Panels have high insulation value . . . superior to a 12" masonry wall. 4. Q-Panels are quickly installed because they are hung, not piled up. An acre of wall has been hung in 3 days. For more good reasons for using Q-Panel construction, use the coupon below and write for literature.



Q-Panel walls (above) go up quickly in any weather because they are dry and hung in place, not piled up.



More than 32,000 sq. ft. of Q-Panels were used to enclose the impressive Hawthorn Steam Electric Station (left) of the Kansas City, Missouri, Power and Light Company. Ebasco Services, Inc., designed and built the plant.

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No need to go through complicated unloading preliminaries . . . no need to open main breakers causing otherwise unnecessary interruptions . . . outages are held to a minimum . . . line repair can go forward immediately.

The S&C Load Interrupter drops the load with no lost time, NO external arc, and with safety to the operator.

HERE ARE SOME OF THE FEATURES YOU'LL FIND IN THE S&C LOAD INTERRUPTER

- Positive, "clean break" switching
- Safety to operators
- Interruption of all load currents and charging currents
- Independence from adverse wind conditions

Only one switch—the S&C Alduti—can give you all of these essential performance features . . . can break the circuit, and do it with NO external arc.

This is why the Alduti Load Interrupter has gained wide preference among power men . . . why leading utilities everywhere specify it for sectionalizing.

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your System?

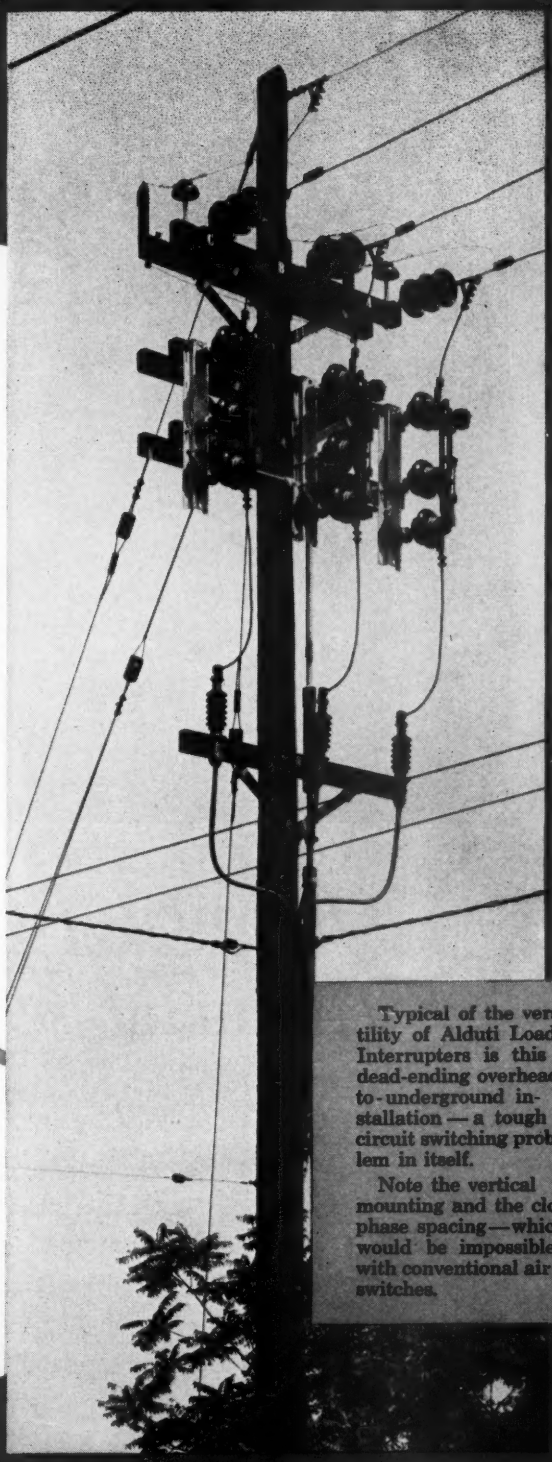
IF NOT, you are missing the kind of operating flexibility you get with the S&C Alduti Load Interrupter . . .

The Alduti Load Interrupter can be operated *any* time . . . instantly . . . without communicating down the line to find out whether load conditions permit switching . . . a very important advantage during storm and emergency conditions.

With the Alduti, switching operations can be carried out without sequencing with circuit breakers—an important advantage during storm or emergency.

And it can drop your *entire* load . . . individual loads never need to be removed as a preliminary.

Interested? Then write today for literature. It will give you new ideas on sectionalizing.



Typical of the versatility of Alduti Load Interrupters is this dead-ending overhead-to-underground installation — a tough circuit switching problem in itself.

Note the vertical mounting and the close phase spacing—which would be impossible with conventional air switches.

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UTILITIES
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OCTOBER-NOVEMBER

Thursday—27 *National Association of Railroad and Utilities Commissioners ends annual convention, Asheville, N. C.*	**Friday—28** *Southern Gas Association begins eastern distribution design and construction conference, Birmingham, Ala.*	**Saturday—29** *American Society of Mechanical Engineers will hold meeting, Chicago, Ill. Nov. 13–18.* ***Advance notice.***	**Sunday—30** *American Water Works Association, Alabama-Mississippi Section, begins meeting, Biloxi, Miss.*
Monday—31 *Pennsylvania Electric Association, System Planning Committee, begins meeting, Pocono Manor, Pa.*	NOVEMBER **Tuesday—1** *National Association of Corrosion Engineers begins northeast regional fall meeting, Niagara Falls, N. Y.*	**Wednesday—2** *American Home Laundry Manufacturers Association begins meeting, San Francisco, Cal.*	**Thursday—3** *South Dakota Telephone Association begins annual convention, Sioux Falls, S. D.*
Friday—4 *Pacific Coast Electrical Association, Business Development Section, ends 2-day annual conference, Pasadena, Cal.*	**Saturday—5** *American Water Works Association, Virginia Section, ends 3-day annual meeting, Roanoke, Va.*	**Sunday—6** *Controllers Institute of America begins meeting, Los Angeles, Cal.*	**Monday—7** *American Society of Electrical Engineers begins eastern joint computer conference, Boston, Mass.*
Tuesday—8 *American Petroleum Institute will hold meeting, San Francisco, Cal. Nov. 14–17.* ***Advance notice.***	**Wednesday—9** *Industrial Management Society begins annual time and motion study and management clinic, Chicago, Ill.*	**Thursday—10** *Pacific Coast Electrical Association, Hawaiian Section, begins conference, Honolulu, Hawaii.*	**Friday—11** *Southeastern Gas Association will hold meeting, Roanoke, Va. Nov. 16–18.* ***Advance notice.***

Courtesy, General Telephone Company of California
Photo by Walter Douglas

Vigil of Communications

Telephone wires silhouetted against background of devastating forest fire.

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Public Utilities
FORTNIGHTLY

VOL. 56, NO. 9 OCTOBER 27, 1955

TVA Should Remain under the Control of Congress

A forthright statement on the proposal that TVA be permitted to issue its own revenue bonds, in order to construct power facilities for which funds had been consistently denied by Congress, was made before the Senate Public Works Committee. In doing so, the author, an electric utility executive in his own right, spoke for some 3,000 business organizations, which comprise the Chamber of Commerce of the United States.

BY LOUIS V. SUTTON*
FORMER MEMBER, COMMITTEE ON NATURAL RESOURCES,
CHAMBER OF COMMERCE OF THE UNITED STATES

THE Chamber of Commerce of the United States is opposed to the enactment of the Kerr TVA bill (S 2373 in the 84th Congress). This bill proposes a new device for perpetuating and enlarging the TVA power system. Merely changing the method of financing this unregulated federal monopoly does not resolve the basic issue—that government should not use taxpayers' money to provide electric service for any section or

*President and chairman of the board, Carolina Power & Light Company, Raleigh, North Carolina. For additional personal note, see "Pages with the Editors."

area of the country. S 2373 does not remove the obligation of the federal government in the TVA area, but instead proposes to continue both federal appropriations and the use of federal credit to support additional borrowing from taxpayers.

As a matter of principle, the national chamber is firmly opposed to the federal government constructing steam-electric plants or any dam purely for power purposes. Nearly three-fourths of the total assets of the TVA are in power facilities, and the investment is increasing rapidly. Not only should further federal investment in TVA power be halted, but the existing investment should be repaid to the taxpayers of the country. It is time for the people of the TVA area to become self-supporting in their power supply. They should no longer need financial assistance from other taxpayers for a service which they could provide for themselves.

THE chamber recommends that TVA be relieved of its function of producing and transmitting electric power and be confined to the duties of conducting its authorized nonpower functions. We believe that, eventually, the TVA power facitities should be transferred to local ownership and operation. This should include transmission lines and the steam and hydroelectric plants at TVA dams, but not the dams or other related features.

It is evident, however, that TVA's rate structure is highly unrealistic, and any abrupt shift in ownership would encounter the serious problem of production costs exceeding power revenues. Power rates now charged by TVA are insufficient to cover such costs as interest and taxes, and new owners of TVA's system would be required to raise their rates immediately. Studies by the national chamber have shown that TVA power is being sold at rates which, when examined in the light of sound accounting procedure, are recovering only a portion of the true costs. The remaining portion of the real power cost is the subsidy paid to TVA customers by the nation's taxpayers.

THE chamber has prepared a comparison of TVA's charges with those required by a private utility operating a similar system. The difference between the two is a measure of the TVA subsidy because it shows the added costs of producing power that have been neglected by TVA.

Here are some important figures from the chamber's study, showing that the federal subsidy includes:

(1) $284,457,000 additional interest on power investment if TVA were owned and operated as a private utility.

(2) $346,447,000 additional taxes not paid by TVA but required of a comparable private utility.

(3) $30,359,000 additional charges resulting from TVA's higher allocations to navigation and flood-control features of multipurpose projects.

The total of these amounts is $661,263,000 in unrecovered costs.

Thus, the first step toward ultimate local ownership and operation of electric power facilities in the TVA area is to require TVA, with the advice and consent of the Federal Power Commission, to adopt power rates which would cover all costs of production, transmission, amortization, and interest on the remaining

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federal investment, and the full equivalent of local, state, and federal taxes.

Even at such increased rates as would thus be required, consumers of TVA power would still be buying a competitive product at rates lower than those required by private enterprise. This is true because government interest rates are lower, unpaid interest has been reinvested in TVA power facilities, allocations of costs of multipurpose projects to navigation and flood control have reduced the apparent cost of power, and TVA's costs have never included interest during construction, or workmen's compensation.

THE TVA Act instructs TVA to sell surplus power to public and private agencies with preference to the former, and to give primary attention to the needs of domestic and rural customers. Much of this original act was a major departure from previous national policies. TVA has been in operation for more than twenty years, but the direction has not been entirely consistent with the original congressional authorization. TVA has gone far beyond the definition of "surplus power." In addition, it has ceased to give primary attention to domestic and rural customers. Its annual report for 1954, for example, shows that nonpreference customers received 12 billion kilowatt-hours of energy and the statutory preference customers—co-operatives and municipalities—received 11 billion kilowatt-hours of energy. Obviously, both types of customers have come to depend on TVA for power.

If, however, the large or nonpreference power users were to furnish their own needs, TVA's present power supply, plus the capacity under construction, would be sufficient to take care of the rural and domestic needs for many years in the future.

THEREFORE, the national chamber believes that additional power capacity in the TVA area should be provided by the power users themselves rather than by the federal government through TVA. We recommend that instead of approving S 2373, Congress should adopt the following 10-point program and write new legislation to make it effective:

1. Establish a firm policy that no further funds from either federal appropriations or revenue bonds be used for construction or operation of TVA's power facilities.

2. Require TVA to develop a new power rate structure, in collaboration with the Federal Power Commission, which will reflect all costs, including in-

❦

¶ "THE *Chamber of Commerce of the United States is opposed to the enactment of the Kerr TVA bill (2373 in the 84th Congress). This bill proposes a new device for perpetuating and enlarging the TVA power system. Merely changing the method of financing this unregulated federal monopoly does not resolve the basic issue—that government should not use taxpayers' money to provide electric service for any section or area of the country.*"

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terest, taxes, and amortization on a sound business basis.

3. Free TVA's distributing agencies from the "sole-supplier" clause of their contracts with TVA so that they may: (1) purchase power elsewhere; (2) build and operate power plants of their own, but not under lease or lease-purchase arrangements with TVA; or (3) sell power to TVA at full-cost rates approved by the Federal Power Commission.

4. Require TVA to continue repaying to the Treasury within forty years, or less, the funds invested in power, and to pay interest on the remaining Treasury investment at current rates of interest on long-term Treasury bonds.

5. Require TVA to pay to local and state governments the full equivalent of local and state taxes on like private enterprises.

6. Require TVA to pay into the Treasury, in addition to the principal and interest on invested funds, a suitable percentage of gross revenue in lieu of, and in line with, federal income taxes.

7. Require TVA to pay to the Treasury the depreciation accruals and surplus revenues, after other obligations have been met.

8. Until all federal funds have been paid back, with full interest, require that Congress retain full control of TVA policies; require that the present system of annual audits by the General Accounting Office be continued; and require that TVA comply with the Government Corporation Control Act regarding the deposit of its funds in the U. S. Treasury.

9. Limit TVA to its present service area.

10. Permit local private or public power agencies to purchase all or any part of TVA's power plants and transmission facilities, without preference as to whether the agency is public or private.

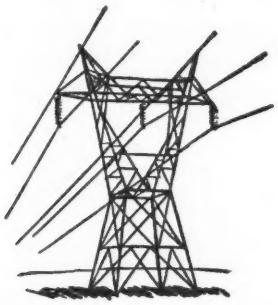
This program will correct most of the injustices which now exist and will accomplish much that should be done in the interest of the federal taxpayers.

The Hoover Commission Task Force on Water Resources and Power made practically these same recommendations in regard to TVA. The full Hoover Commission, however, did not agree with the recommendation of its Task Force that TVA's steam plants and transmission facilities should be sold to local agencies. Instead, it recommended (Recommendation No. 10) that no further steam plants be built by TVA and that provision be made for the "equation" of its power load by interconnection with the grids of neighboring power systems.

Revenue Bonds

S 2373 would give TVA the authority to issue, at the discretion of the TVA board of directors, its own revenue bonds, not guaranteed by the Treasury, which could be sold to the public, or, by mutual agreement, to the Treasury. These bonds would be exempt from state and local taxation but not from federal taxation.

The national chamber opposes financing new TVA power facilities through the sale of revenue bonds because this method departs from the basic principle that all federal spending for federal activities should be subject to strict congressional



The Transition of TVA to Private Enterprise

"THE Chamber of Commerce of the United States believes that the electric plants and the transmission facilities of TVA should eventually be sold to local private or public ownership, thus breaking TVA's unregulated power monopoly. The first step toward this objective should be to raise TVA's power rates to cover all costs of production, transmission, amortization and interest on the investment, and an equivalent of federal, state, and local taxes."

control and scrutiny in the interest of all the taxpayers. We oppose the use of revenue bonds by TVA because it would also circumvent federal debt limit provisions.

ADVOCATES of this method contend that the revenue bonds would not be a debt of the federal government. It is true that in the case of municipalities and state districts, lawyers have so written the indentures that, from a strictly technical legal viewpoint, revenue bonds may not be considered debt chargeable against the municipal or state debt limits. But, after all, the obligation represents a promise to pay.

From a fiscal, economic, and moral standpoint, it is a debt. In those instances wherein it is left out of balance sheet and income statements, independent auditors always cover it fully in supplemental statements or notes to the financial statements.

THE proposed TVA revenue bonds would represent debt of the federal government. Furthermore, such debt is of a preferred type, inasmuch as it has prior claim on earnings. Other obligations are subordinated, which means that repayment of the appropriation investment—taxpayers' dollars already converted to TVA assets—comes far down the list. The only real solution to eliminating the present and the proposed additional public debt in TVA is to terminate TVA's power operations as a federal obligation.

A further objection is that the issuance of revenue bonds by federal agencies

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would not be subject to congressional and Budget Bureau approval, or regulation by the Securities and Exchange Commission or any other regulatory body. Thus, TVA would not have to file even a revealing registration statement.

Lease or Lease Purchase

S 2373 also contemplates that additional power capacity for TVA might be obtained under lease or lease-purchase agreements with TVA's customers or distributing agencies. This would enable non-federal bodies to build their own power plants and sell power to TVA for resale to TVA's customers. Under such arrangements, TVA would be an unnecessary middleman, and the local agencies would be under a two-way obligation with respect to TVA.

A recent publication of an organization known as "Citizens for TVA" explains what is proposed, in the following words:

> A lease-purchase agreement could be made. The agency would raise the money, and the plant which would be constructed might be operated by TVA under a long-term lease. The rentals paid by TVA would cover the cost of the plant and interest, and TVA would get the plant when the cost had been fully paid off. The plant would be operated as an integral part of the TVA system. This would make for the most economical production of power.

This device would not only disguise the debt but would also enable TVA to circumvent the will of the Congress. It certainly would be an unwise grant of power to any agency of government.

The national chamber opposes both the direct method of TVA financing by revenue bonds and the indirect method of revenue bonds issued by local governmental agencies for constructing power capacities in excess of their own needs for the purpose of lease to TVA.

We believe that the local public agencies that purchase power from TVA should be freed from the restrictive "sole-supplier" clause of their contracts with TVA and be allowed to purchase power elsewhere or develop their own power for their own use. Any power thus developed and not needed locally might be sold to TVA, but this should be done only under power-sales contracts in which TVA gains no equity in the local investment. This power should be sold at full-cost rates approved by the Federal Power Commission.

Under a lease or lease-purchase plan, any local agency also would have to issue revenue or general obligation bonds. Such securities would be tax-exempt and might be marketed more readily than those proposed to be issued by TVA which would be taxed. This would make a lease-purchase deal attractive to both TVA and the local agency.

In speaking about the possible use of outside financing, a TVA press release of April 5, 1955, uses the following statement:

> An agency which might otherwise be able to finance a plant might not be qualified to design and build it. TVA should be authorized to provide engineering and construction services in such cases.

Here is a proposal to put the federal government into competition with private

engineers and contractors. TVA already has forced out all competition in the production and distribution of electric energy in an 80,000-square-mile area. TVA's operations already have had a detrimental effect on such industries as insurance, coal, transportation, fertilizer, and natural gas. We are against government engineering and construction forces bidding against private industry.

If Memphis or any other municipality or public body in the TVA area should follow this lease-purchase course, their revenue bonds would be, in effect, an obligation of the federal government.

Therefore, the chamber opposes the lease-purchase proposal because it is a dangerous device which, by subterfuge, would perpetuate and expand the TVA without relieving federal taxpayers. Furthermore, under this arrangement, Congress would relinquish some of its control over TVA, which we believe must be retained and strengthened.

Appropriations

S 2373 would not repeal the section of the Tennessee Valley Authority Act of 1933, as amended, which authorizes federal appropriations to TVA for the construction and maintenance of electric power generation and transmission facilities. TVA proposes to continue to ask for federal appropriations, as well as revenue bonds, as shown by the TVA's press release of April 5, 1955.

The chamber believes that no further federal funds should be appropriated to TVA for expansion of its electric power business. Appropriations would not be needed if TVA's power operations were required to pay their own way. Only by requiring power users to pay the full cost of power can revenues be increased and the obligation of the taxpayers eliminated.

Expansion plans of TVA show that by 1957 the total generating capacity will be about 9,500,000 kilowatts. About 2,800,000 of these are to be allocated to atomic energy installations. The Atomic Energy Commission might cancel its scheduled power demands, leaving TVA with a great excess capacity. We believe it is more reasonable to prevent this cost of unused excess capacity by curtailing the federal investment and obtaining any additional power needed for the area from other sources.

For example, during fiscal year 1954, TVA purchased over 3.5 billion kilowatt-hours from neighboring utilities. A substantial amount of both primary and secondary power could be obtained from the area surrounding TVA. A number of companies have offered to supply substantial blocks of primary power.

Interest

S 2373 would require TVA to pay into the Treasury interest "equal to the computed average interest rate payable by the Treasury upon its total marketable public obligations." (Section (e), page 6, lines 18 and 19.) We recommend that interest should be paid at the rate on equivalent long-term federal bonds, rather than at the average cost of all obligations which would be much lower.

Depreciation Accruals and Return of Appropriation Investment

S 2373 proposes that TVA be required either to reinvest from revenues at least the equivalent of depreciation ac-

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cruals, or to reduce its capital obligations accordingly. We strongly recommend the latter alternative.

Under provisions of S 2373, amortization and debt service on TVA revenue bonds would have first claim on all power revenues after payment of operation and maintenance expenses and payments in lieu of local and state taxes. Revenues would be used next for payment of interest to the Treasury on appropriated funds. Remaining revenue, if any, would be either reinvested in power system assets or used for debt (revenue bond) retirement and repayment of the federal investment.

Under this formula, there is no guaranty that TVA would make any repayments of the appropriation investment. The chamber recommends no change from the present statutory repayment of the appropriation investment within forty years, or less.

Summary

THE Chamber of Commerce of the United States believes that the electric plants and the transmission facilities of TVA should eventually be sold to local private or public ownership, thus breaking TVA's unregulated power monopoly.

The first step toward this objective should be to raise TVA's power rates to cover all costs of production, transmission, amortization and interest on the investment, and an equivalent of federal, state, and local taxes. This recommendation of the chamber is the subject of Recommendation No. 9 of the Hoover Commission in its Report on Water Resources and Power.

TVA has grown from a small agency concerned with resource development and by-product hydroelectric energy to a vast electric power system. Its further expansion would require additional steam-generating facilities to be financed at least in part through federal funds provided by the nation's taxpayers. We believe this expansion and continued drain on the taxpayers must stop.

Until relieved of its power functions, TVA should be limited to its present service area and its existing facilities, and should give its primary attention to the statutory functions of serving domestic and rural needs. Additional power supply in the area should be provided by the large industries and municipalities themselves through independent financing and individual ownership. Congress should increase rather than relinquish its control over TVA activities.

WE oppose the continuation of federal appropriations, the issuance of revenue bonds, and the lease or lease-purchase arrangements with TVA distributors or customers. Each of these methods would perpetuate TVA as a federally subsidized system and would not make the TVA area self-sufficient in its power needs.

Until such time as the TVA power plants and transmission facilities can be placed under local ownership and operation, TVA should continue repaying the federal investment and pay interest on the remaining investment at regular government rates on long-term obligations.

Do Utilities Need Engineered Work Standards?

Can practical engineered work standards be developed and applied? What problems are created in their application? How much are engineered work standards worth to a utility? These are broad questions, but enough practical experience has been gained in both gas and electric utilities to yield reliable answers.

By JAMES W. TAYLOR*

Under the constant regulatory pressure for reduction in the price the public pays for electricity, the electric utility industry has made phenomenal strides since the early days of the century (and utility regulation). From a quarter of a dollar in the pioneer period of Edison's Pearl Street station, the price per kilowatt-hour has dropped steadily, with only occasional upward variation to its present over-all industry average of 2.67 cents per kilowatt-hour in revenue per electric utility customer.

During the early period, regulatory pressure was stressed in various ways: clarification of patent rights and service areas, corporate consolidations, sales expansion, reduction in the "rate base," limitation of the "return," etc. Today, the pressure is felt more than ever, in view of the postwar counterprice trend due to inflation and its impact on operating expenses. Today, electric utility management faces an ever-narrowing margin of

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potential economies, and technological improvements, from which to squeeze further savings in operating expenses per unit of kilowatt-hour production.

How can the industry's traditional absorption of higher costs be sustained? Where can it look for more effective "cushions" against proportionate rate increases to the consuming public, such as all other forms of public utility service have been forced to adopt? In short, has the electric industry reached the end of its rope in blocking abrupt price rises to reflect inflationary costs? Or can something more be done to "hold the line"? Those are the questions as to which this discussion of engineered work standards for utilities (gas as well as electric) may provide some interesting and perhaps valuable suggestions, if not outright answers.

THE remarkable historical ability of utilities to furnish more and more therms and kilowatts for less and less cost to the consumer makes the writer hesitate to predict that from this point forward significant cost reductions will come only from more efficient use of labor. However, at least until atomic power (in use) obsoletes our present concept of heat generation, it appears to be a fairly valid prediction. In addition, it is a prediction that utilities can effect quickly without waiting for the slow but cumulative effect of additional utility plant. Also, it is a cost reduction which can be effected without the investment of large sums of capital into boilers, gas generators, turbines, pumps, and storage facilities.

If the next major forward step toward delivering cheaper power to the consumer is to come from better utilization of labor, then there must be thought given to the way in which it may be made to come to pass.

The manufacturing industries discovered that for them the answer was in the establishment of an engineered work goal (or standard) and the subsequent measurement of work produced against the standard. These same industries then went on to exploit the system by using work standards for other important uses, such as estimating future work accurately and using the standards as a basis for incentive wages.

THERE is little doubt that much of the credit for the remarkable evolution of manufacturing machines, tools, and equipment is due to the constant reaching for optimum labor costs as demonstrated through the techniques of labor analyses and standards. This same effect can be demonstrated in utility jobs, wherein the application of engineered labor leads to labor-saving equipment as well as labor-reducing methods and controls.

Utilities have not been unaware of the potential results which can be expected of engineered labor and have in fact made use of them in activities which are similar to those found in the manufacturing industry. Electric and gas meter overhaul shops are prime examples, and in some shops the standards are even used as the basis for incentive pay. By and large, however, there has been little clear and systematic application of the work standards and measurement techniques to operations which are peculiar to utilities, such as the major labor activities of line construction and maintenance, gas and water main installation and maintenance, and customer service.

Looking back on the hesitation of utili-

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ties to embrace the techniques of work standards, several reasons for the slowness are in evidence:

(1) Utilities have been preoccupied with the all-important task of expanding facilities fast enough to keep up with the insatiable demand.

(2) Utilities have always searched out and hired highly competent mechanical, electrical, and chemical engineers, but have rarely provided a place in the organization for industrial or management engineers. Accordingly, industrial engineers have never had an opportunity to demonstrate the results which are possible.

(3) During the last twenty years of dynamic expansion most of the labor was expended for plant additions and thus high labor costs appeared as rate supporting assets rather than operating costs. This factor did not in itself generate a desire to reduce the cost of labor.

(4) Finally, and most significant, utility people have thought of labor standards only in the very narrow scope of highly repetitive and duplicate operations, and have given little consideration to their application to jobs which are similar but not duplicated, and repetitive only to the degree that they occur several times a day or week or on an intermingled basis.

Reviewing the preceding four points also explains why these same utilities are beginning to put some attention to better control of labor. They have learned, through necessity, to handle expansion as a normal activity and are thus stimulating some management thinking for tighter control of operations. They are beginning to appreciate the need for labor engineering and sending men to schools to develop labor engineering thinking. The huge plant expansion is now beginning to result in higher operating costs as maintenance loads grow and the advantages of high labor content in asset accounts are more and more offset by the disadvantages of high labor content in maintenance and operating statements. The general embracing of engineered labor standards, however, has not been accomplishd because utility engineers and management have not come to understand fully the theory of labor standards in nonrepetitive operations. This presentation attempts to explore the application of engineered labor standards to the whole area of electric and gas transmission and distribution operations. By inference the telephone and water utilities are also included accordingly.

In the past several years a few utility companies have concentrated some attention on the development and use of engineered labor standards as a means of re-

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ducing costs. From these installations several important conclusions have resulted which are of prime importance to the utility reader and these conclusions are enumerated herein. The three areas of experience are gas customer service operations, electric line construction and maintenance operations, and gas mains construction and maintenance operations.

1. The Existence of Engineered Work Standards Is More Important than Their Detailed Accuracy

THE first statement to be made here, "complete accuracy of labor standards is not practicable, nor is it necessary," is a stumbling block over which utility engineers have little stomach to climb. Up to now they have revered the decimal and its closest three numbers in the computation of fuel utilization, boiler losses, and consumer rates, and frequently have had to justify such accuracy to top management or public utility commissions. It is no wonder that the apparent casualness of developing standards which are completely satisfactory, but which may vary 15 per cent to actual, does not get acceptance as an "engineered" value to the mechanical or electrical engineer.

Obviously, the point that is being lost sight of is that, although the efforts of the labor engineer result in standards which may be only 85 per cent accurate, at the outset, the application of such standards gets possibly 95 per cent of the total control. In such instances, the extra effort to get +15 per cent accurate standards is probably not worth the added benefits of 5 per cent additional control.

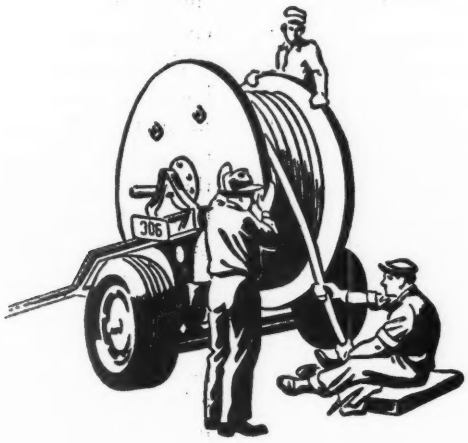
The trained engineer, discovering that accuracy is not completely possible, is prone to abandon the development of the engineered standard and fall back on the "guesstimate" or the rule of thumb, which he feels is just as accurate. The difference, and it is an important one, is that the engineered standard has the validity of an organized engineering analysis of the several components whereas the rule of thumb is simply an expression of past sins. In application this element of validity is paramount because it is the fair justification of the standard to the worker, to supervision, and to management. Validity furnishes authority, and authority helps sell the result.

2. Utility Outside Operations Can Be Engineered for Labor as Well as Material and to a Satisfactory Degree of Accuracy

TODAY a transmission and distribution planning engineer accepts a problem of delivering a given amount of energy to a given point and confidently sets up specific requirements for conductors, poles, transformers, protective devices, gas mains, gas regulators, etc. In other words, he puts together a series of specific elements to provide an integrated solution.

The same approach can be used for labor, through the use of slightly different individual elements; *i.e.*, labor elements that are identified to certain of the material elements, but are expressed in terms of time.

Through observation and analysis, all outside operations can be broken down into a few basic labor elements, in practice not more than thirty for either gas or electric operations. In addition to the basic elements, multipliers can be predetermined for quantity variable (such as number of conductors) and condition variables (such as voltage, pressure, ground, and access



The Accuracy of Engineered Standards

". . . although the efforts of the labor engineer result in standards which may be only 85 per cent accurate, at the outset, the application of such standards gets possibly 95 per cent of the total control. In such instances, the extra effort to get +15 per cent accurate standards is probably not worth the added benefits of 5 per cent additional control. The trained engineer, discovering that accuracy is not completely possible, is prone to abandon the development of the engineered standard and fall back on the 'guesstimate' or the rule of thumb, which he feels is just as accurate."

condition). Providing the labor elements and corresponding man-hour requirements for each have been pre-established, it is then a routine matter for an engineer quickly to build up the planned labor requirement for the whole job, to parallel the material requirements.

THE opportunity for determining the labor content of any job through the above method is dependent upon three factors:

(1) *The Proper Selection of Labor Elements*

The labor elements must be detailed enough to offer reasonably accurate time values, but few enough to be reasonably applied. In addition, they must be identifiable to a material or job element. Experience to date indicates that all three of these requirements successfully can be met to the degree of accuracy required.

(2) *The Successful Assignment of Permanent Time Values to the Selected Labor Elements*

Determining the basic man-hours to complete any labor operation can be ac-

complished through actual observation of the operation as performed by qualified workers, using the right equipment for the job. Observation experience on many outside jobs, performed under equivalent methods, offers proof that any operation will require almost the same amount of time each time it is done.

(3) *The Conditions under Which the Job Will Be Done*

The third and last factor is the knowledge of those related side issues which will have a bearing on the man-hours required. The most important are: (1) ground conditions (normal, rock, swamp, level, hill), (2) access conditions (parallel road, open country, brush), and (3) line condition (energized or cold, gassed or nongassed). These side issues are always known to the planning engineer either from previous work, from ground or aerial surveys, and from requirements of the customers being serviced.

3. Engineered Work Standards Lead to Improved Equipment and Work Methods

THE establishment of a standard for a given operation, such as digging a hole, is predicted upon a study of the equipment to be used and the work pattern or sequence to be performed. To accomplish this the methods engineer tries various combinations of equipment, tools, and men until he finds the combination which provides a quality job with the least effort from the men and at the lowest cost. In effect, he sets up cost standards for each possibility, the labor portion of which is engineered with the same care as the material portion.

Most methods improvements, and resulting cost savings, depend upon an accurate comparison of an existing method with the proposed change. Engineered labor standards provide the basis for measuring not only the existing method and equipment, but also for estimating closely the labor required for the proposal. With this tool utility management can assign personnel to methods improvement projects, secure in the knowledge that there is a valid method by which their progress can be measured. On the other hand, the personnel charged with cost reduction have a basis for determining the true value of new equipment, jigs, fixtures, and crew sizes, when compared to the cost of the eliminated labor.

4. Engineered Work Standards Provide a Sound Basis for Measuring Performance

WITHOUT work standards the comparison of any man or group of men is difficult because there is always a question as to whether or not the comparison is valid. On the other hand, when performances to accepted engineered standards are compared there is little argument.

Supervisors of outside operations are quick to point out that their supervisory and disciplining problems are difficult because of the nature of the work. First, they are frequently challenged by labor representatives when disciplining is attempted. The result is a double-barreled failure because not only is the offending worker allowed to get by with substandard performance, but the supervisor becomes nothing more than a straw boss. Second, it is difficult to make sure that each of fifty or two hundred crews, working blocks or miles apart, is continually performing the meth-

od or using the equipment the way it was planned. With standards, crew performance records will quickly show where supervisory or training attention is needed.

Some further observations regarding performance measurement have resulted from the analyses of the several standards installations. One is that care must be taken not to use an engineered work standard to measure any single job, or to measure a man or a crew over a short period of time. The specific conditions under which jobs are executed vary in outside work and, therefore, performance must be measured over a long enough period to allow the law of averages to come into play. In some instances this may be as many as 25 jobs or as much as three months.

Another observation is that the collection of performance data will add to the cost of operations. Frequently it can be accomplished mechanically on punched card equipment and sometimes it can best be done manually, but the company should understand that there may be some added clerical costs in any event. Experience shows that such costs are insignificant when compared to the savings gained.

5. The Introduction and Full Use of Engineered Work Standards Will Require Considerable Management Training at All Levels

THE engineering of labor and the application of resulting standards throughout gas, electric, and water utilities pose some additional load on company management. The methods studies themselves and the development of the specific standards are jobs which are technical in nature, but which can be done by any competent methods and standards engineer, or by a mixed group of competent methods and standards engineers and company engineer trainees.

The application of the resulting engineered methods and standards, however, is a management job, and the benefits which will be derived will be directly proportional to the extent of understanding and direction given by management. The bringing along of supervisors and staff men to the point of making full use of standards is probably much more difficult than the establishment of the standards and certainly will take considerably more time to effect. A few of the items of understanding which might well be developed are listed here to indicate the directions which management education and training must take. They are listed both for levels of management and for staff activities:

(1) *Foremen* must understand how the methods and standards were derived

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and must be trained in explaining them to their men and to labor representation. In addition, they must be educated to watch for refinements and improvements and they must be prepared objectively to explain their crew's performance as compared to the standards.

(2) *General foremen,* in addition to matching the foremen's requirements, must know how to interpret reports based on the standards and how to take corrective action as indicated.

(3) *Superintendents* must match the general foremen, actively support the program, and in addition must recognize additional areas for the refinement or application of the engineered methods and standards.

(4) *Top management* primarily must be requiring both to stimulate the acceptance and use of engineered labor philosophy and to direct operations along the paths indicated.

(5) *Engineering staff* must know the principles of engineered labor so that their layouts and designs meet labor engineering requirements.

(6) *Purchasing staff* must understand enough about the program continually to watch for tools and equipment which will reduce labor.

(7) *Industrial relations staff* must be thoroughly familiar with the program so that proper action can be taken with respect to labor contracts, negotiations, and grievances. Also, the industrial relations group must back up the principle of work measurement as the basis for discipline.

(8) *Accounting staff* must have a working knowledge of the program because most of the records and reports will necessarily come from or through accounting records and machines.

At the beginning of this presentation three questions were posed for discussion. Certainly the answers to such important questions for any specific utility cannot be answered here, but they can be answered in a general way based upon the background of experience in the manufacturing industries and upon some recent specific experiences in the utility field.

Can practical engineered work standards be developed and applied to utilities?

The answer is an unqualified yes, providing there is agreement on what is "practical." For utilities a practical standard is one which has been engineered through methods studies and which is accurate within 15 per cent over a short period or on single jobs. This will give high accuracy over longer periods of time and more jobs.

What problems are created in the application of engineered work standards?

There are a host of new problems created but they are all those which can be expected by any progressive management moving toward improved operations. The biggest single problem is that of educating management at all levels to the full appreciation of engineered labor.

How much are engineered work standards worth to a utility?

It appears that cost reductions of 20 per cent to 30 per cent are practical for all mechanical work which has not previously been engineered for labor. A quick glance at any utility's operating statements will show what this represents in dollars.

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What Makes Company Public Relations Tick?

This article is based on a study and resulting report as to the organization, procedures, and practices of gas and electric utilities. It is essentially an exploratory analysis of the objectives, responsibilities, and mechanics of public relations programs, with a review of historical background of comparable practices of a representative cross section of these operating utilities.

By HENRY OBERMEYER*

PROPERLY classifying this study would place it under the head of "Exploration"—a venture into unexplored territory where every man has to provide his own map. The one solid fact brought out by our investigation is that a considerable lack of uniformity now exists in the organization of public relations as practiced by the 59 utility companies throughout the country which returned our questionnaire.

This is not merely a pilot study. It is a pilot study for a pilot study. It is a step toward finding out what sort of questions we need to ask in order to get a true picture of the situation which perhaps—we stress "perhaps"—may eventually guide us to the kind of public relations structure that will best serve the requirements of the industry.

Although this particular contribution may be insignificant, except as a starting point, the importance of the problem itself cannot be overestimated. How well the electric and gas industries handle their public relations at the local level, as well as on the national level, may well determine whether or not they can survive as investor-owned entities in the decade ahead.

The great decisions affecting the companies are made at Washington. But the multiple elements that make up these decisions originate among the direct customers, employees, and stockholders of the companies themselves. Implementation must be consistent with over-all policy.

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Little is gained if those who speak for the industry at committee hearings of the House or Senate are contradicted, unsupported, or even weakly supported at "the grass roots."

So, we make no apology for the sparseness of the results. You will find more questions in this study than answers—more stalemates than statistics. Such as they are, however, we hope and believe they will stimulate further thought and exploration into critical territory.

Previous Studies

BACK in 1948, *Printer's Ink* made a similar attempt to investigate public relations organization among 69 companies *outside* the utility field. "The answers," concluded the editors, "were so diverse as to defy the tabulator." Partly to blame were the public relations men themselves. Perhaps a large part was due to the confusion in meaning of public relations itself, which in turn led to confusion or difference on the part of those in charge of such functions. However, the ultimate conclusion was inescapable:

> Promotion of public relations as a management tool has by and large been neglected.

Some rough agreement was reached as to the following objectives of a public relations program:

1. To develop a greater understanding by the public of the company's functions, policies, problems, and products.
2. To reach employees and their families in the community with a message that puts company policies and work at the company's plants in a favorable light.
3. To maintain good stockholder relations.

This may or may not have been a satisfactory set of targets for some industries. However, such a limited program would barely scratch the surface of basic needs known to exist in the utility industries today.

In confining our study to public utilities, therefore, we can take a closer look at some recognizable and specialized situations that reflect the differences between the business of public service and other commercial undertakings.

Responsibility for Public Relations

IN any management function, responsibility is a *sine qua non*—and with responsibility goes, or should go, authority. On the first count—responsibility—our study brought fairly uniform response. Answering the question, "Is some one individual responsible for initiating, conducting, or co-ordinating public relations activities?" 55 out of the 59 answered in the affirmative.

We then asked: "Does his responsibility include press relations, customer relations, community relations, stockholder communications, employee communications?" As might be expected, all or nearly all acknowledged responsibility for press and community relations, with customer relations closely following. Employee communications also registered high, but only 37 out of the 55 affirmative answers indicated active concern with stockholder affairs.

This may not represent as much of a gap as at first appears, since a number of the returns came from operating companies whose financial matters are handled

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by a holding company. In other cases, however, it was evident that all relations with stockholders, including "communications" (as our questionnaire was careful to define it), were the province of the president or financial officer.

Titles

In asking for the title of the individual responsible for public relations, we sought to determine lines of authority. Out of fifty-eight answering this question, twenty-one are vice presidents reporting (for the most part) directly to the president. Twenty-two have the conventional title of "director of public relations," or its close equivalent; of these, only nine report solely to the president—the remainder to a vice president (in two cases to both vice president and president)—and in one instance to the general manager.

Titles among the other fifteen include "director of advertising," "director of publicity," and "assistant to the president." Of this group, ten report to the president, including one whose title reads "assistant to vice president."

Further questioning should reveal the extent to which (in the case of the twenty-one vice presidents, especially) public relations is a full-time activity; or whether the function of public relations per se is not, in effect, carried on by a subordinate under general direction. We have a clew to this—as well as an answer that might well be made the subject of a separate study—when we learn that all except four respondents have important duties outside of those normally defined as public relations.

For example, forty-four also handle advertising, thirty-three municipal relations, thirty-one employee relations, twenty-seven franchises, twenty-three relations with rural electric co-operatives, and others include sales and "civic projects."

Influence on Policy

Encouraging from a public relations point of view were the answers regarding the public relations man's influence on company policy. Fifty respondents stated, without qualification, that they not only were given the opportunity to present their views, but that such views were also given adequate consideration by management. Discussions of this nature generally take place at informal management or staff meetings. However, in five instances the answers specified executive committee;

¶ "Recognizing *that virtually every department of a company affects or is affected by a public relations interest, we were interested to learn to what extent the public relations man had authority to work directly with other divisions. Affirmative answers came from fifty-two, one of them adding 'in fact, it is a definite responsibility.' In two cases, such authority was expressly limited to press relations; others felt it necessary to go through 'proper channels,' or waited to be consulted by other department heads. As one phrased it, intracompany relations are 'on co-op basis, not line authority.'* "

and nine stated that they attended board of directors' meetings (five, in fact, being members of such boards).

Qualified answers were given by three (views are "sometimes" given consideration); while five were negative or doubtful, "depending on the situation."

Size of Department

THE size of a company's organization engaged in public relations activities —whether departmentalized or not—depends, of course, in large measure on the size of the company itself. It may be instructive, however, to glance briefly at the answers showing jurisdiction of the officer or director of public relations.

Out of fifty-nine respondents, seven reported jurisdiction over fifteen employees or more; twenty had five to fourteen; sixteen had less than five; and sixteen others failed to specify. Jurisdiction over advertising was held by twenty-seven; over company publication by thirty-two; over a news staff by thirty-four; a speakers' bureau by three; and over a director of employee information by one.

The question of major responsibility for public relations is revived when it is noted that among those also reporting to the individual responsible for this function, nine are commercial or district managers, six are industrial managers, two are legislative agents, four are safety directors, while others include such completely unrelated titles as purchasing agents, research directors, and rate engineers.

Working with Others

RECOGNIZING that virtually every department of a company affects or is affected by a public relations interest, we were interested to learn to what extent the public relations man had authority to work directly with other divisions. Affirmative answers came from fifty-two, one of them adding "in fact, it is a definite responsibility." In two cases, such authority was expressly limited to press relations; others felt it necessary to go through "proper channels," or waited to be consulted by other department heads. As one phrased it, intracompany relations are "on co-op basis, not line authority."

Where the company's territory is spread over a wide area or large population zone, the alternative is either to give division or district managers a high degree of autonomy in dealing with the local press, civic organizations, etc., or to maintain close direction over all public relations activities from the headquarters office. It proved—as might have been expected—difficult to obtain a definitive answer on this point. Some thirty-eight replied that they worked both ways; that is, directly as well as through local managers, "depending on circumstances." This group emphasized the desirability of maintaining a flexible policy in this regard.

Of the remainder, seventeen work entirely through the managers (in one case providing staff counsel; in another, contacting publications only with the managers' consent); four work directly with local media, specifying, in one case at least, that local managers are kept informed.

ONE respondent appeared to have worked out a Solomon-like compromise by drawing a line between "company" stories and those having a purely local significance. In the latter case, managers have the responsibility to issue statements to the press "within established

Function of Public Relations

"WHILE the organization of public relations among utility companies may be, in some respects, more advanced than that in other types of business, this appears to be a reflection of the need, rather than the result, of better planning. There is still a great deal to be done in formalizing the function of public relations in order to arrive at a better basis for comparison. More especially is this essential for the purpose of co-ordinating public relations activities not only within the company (so their impact may be felt more effectively), but also among companies throughout the industry so that local forces and facilities may be quickly marshaled when needed to give the effect of a truly national program."

policy," but are expected to check stories with *Go* when time permits.

History and Background

PUBLIC relations departments in the formal or organizational sense are, as we have seen, relatively new to all business; yet the public utility business was historically among the first to accept them as an arm of management. Among the companies answering our questionnaire, four said their public relations departments were in existence twenty-five years or more; fourteen gave a span of ten to twenty-five years; nineteen said five to ten; fourteen less than five years; four insisted they had no public relations department as such.

Since public relations is still vaguely defined—and as yet far from having acquired a professional status—it seemed pertinent to inquire into the background and experience of those responsible for maintaining the company's lines of communication. Of fifty-five reporting on this question, thirty stated the individual in charge of public relations had achieved his position by transfer from some other depart-

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ment or function. The remainder—twenty-five—said they were hired for the purpose from outside the company.

An interesting debate could be staged around the following question, derived from one of the replies: "Resolved, that it's easier to teach public relations to a man who knows our business than teach the business to an outside expert."

More than half apparently share this viewpoint—or perhaps have not thus far accorded public relations the maturity of other specialties. Where respondents have been specific, we find in many instances of transfer that the background of the man in question has been largely in related functions such as sales, commercial management, advertising, etc. Others have gained experience over many years on the job. One stated, "He was transferred from assistant to president."

NEVERTHELESS, the margin against hiring from the outside is not great. Perhaps the urgent need for trained public relations people *today* cannot in all instances wait on the process of internal development. The twenty-five in this category, brought into the company, may be presumed to have introduced a fresh outlook, coming mostly from the fields of media, education, or, in one case, "after having served months as public relations counselor to the company."

Regardless of origin, utility public relations people generally understand the value of keeping abreast with outside developments, since our survey shows forty-nine of our fifty-nine total are personally active in national, professional, or industry organizations. Of those organizations named, twenty mention PUAA, thirteen PIP, eleven AGA, eleven PRSA, nine ECAP, four NAEC, while the rest are scattered among service clubs, advertising clubs, and others primarily local or regional in interest.

Who Is the Spokesman?

THERE may or may not be some relationship between experience and status (or authority) bearing on the next question, "Is your public relations man permitted to act as spokesman for the company on some matters?" All except fourteen gave unqualified affirmative answers —not too surprising in view of the qualified nature of the question. Of the "yes" answers (there were forty), only twenty-one, however, appear to have unlimited authority to represent the company directly in statements of general policy. Most are restricted to dissemination of news or utterance in the name of the "appropriate" officer. One acts as "unidentified spokesman in all contacts with the press."

Most of the answers in the "qualified" group might well have been added to the forty above (minus the twenty-one authorized spokesmen), since often the only qualification noted is the necessity for clearance or discussion with top management. Only three negative answers were received—even one of these had liberty to make "off-the-record" statements and answer news queries with "proper" attribution.

Internal and External Communications

WHETHER the spokesman is "unidentified," publicized, or just reporting, however, he must maintain effective communications within the company as well as externally. We find such lines of communication in the following five channels: chief

executive—named 48 times (two additional mention general manager or executive vice president); sales—31 times; advertising—29 times; personnel and/or employee relations—28 times; financial and/or accounting—23 times. These are the divisions of the company with which the public relations man works most closely. Only 12 mentions are specifically accorded engineering or other technical departments, although five sum up the situation with variants of "work with all departments of the company in matters affecting public relations."

Contacts with government—state, local, or federal—may or may not constitute a part of the public relations function. However, twenty-four respondents provide affirmative answers to the question whether such contacts are so considered; thirty-four say "no"; five under "special circumstances."

In the case of the first group, fifteen refer to state agencies (principally the public service commission); nine refer to municipal governments; three to federal agencies, such as the Corps of Engineers, Bureau of Reclamation, and SEC. One has contact with a regional agency, the Interstate Compact Commission; three say they have contact with "all branches of government."

Advertising and Public Relations Budgets

THE function of advertising as a tool of public relations is generally acknowledged, although in varying degree. Only three said they had no influence on the company's institutional advertising; another three give advisory assistance or influence such advertising to a minor extent. Others ranged from "entirely" (30) and "largely" (4) to "partly" (17).

In most companies public relations still has an extempore quality in the sense that no budgets are provided for this purpose except as they are buried in the operating or general miscellaneous expense budget. This obviously makes difficult the preparation and implementation of a well-defined program designed to meet specific objectives.

Only 26 companies reported having a regular budget for public relations: six of these spent over a dollar per meter per year; five spent between 50 cents and a dollar; five spent between 5 cents and 50 cents; and three spent under 5 cents. The remaining seven gave no estimate.

In the list of activities covered by a budget, there were 33 references to advertising in one form or another, nine to company publications, seven to community activities, four to plant tours and plant dedications, while 31 others included such

¶ "How *well the electric and gas industries handle their public relations at the local level, as well as on the national level, may well determine whether or not they can survive as investor-owned entities in the decade ahead. The great decisions affecting the companies are made at Washington. But the multiple elements that make up these decisions originate among the direct customers, employees, and stockholders of the companies themselves. Implementation must be consistent with over-all policy.*"

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items as ECAP, PIP, Reddy Kilowatt, and the annual report. Public relations as a kind of "catch-all" for miscellaneous expenses otherwise difficult to classify is indicated by references to photo expense, TV activities, bill inserts, corporate gifts, employee memberships in external organizations, film projects, service club programs, displays, stockholder meetings, supervisory bulletins, municipal functions, youth programs, and even—in one case—appliance merchandise advertising.

(The foregoing statements are not to be regarded as implying that any of these items are improper expenses.)

Conclusion

THIS concludes the formal report—which, as the reader was warned—would be inconclusive. It is believed that there is much in the answers, however, that a company can use in comparing its own methods and strengthening its procedures for the future.

Consideration was given to relating some of the responses to size or type of company, but in the final analysis this did not appear to justify the effort or space. Coverage of the study was divided as follows: 24 combination electric and gas companies; 20 electric companies; 14 gas companies.

There were 16 in the 500,000-1,000,000 meter group; 23 with 200,000-500,000 meters; nine between 100,000-200,000; and ten companies under 100,000 meters. (The fifty-ninth company was a transmission company.) This appears to be a fair cross section of the industry.

While the organization of public relations among utility companies may be, in some respects, more advanced than that in other types of business, this appears to be a reflection of the need, rather than the result, of better planning. There is still a great deal to be done in formalizing the function of public relations in order to arrive at a better basis for comparison. More especially is this essential for the purpose of co-ordinating public relations activities not only within the company (so their impact may be felt more effectively), but also among companies throughout the industry so that local forces and facilities may be quickly marshaled when needed to give the effect of a truly national program.

"THE CLEVELAND PLAIN DEALER *notes that in 1913 interest on the public debt amounted to about 24 cents per person but in the fiscal year recently ended it was $42.18 per person.*

"Those who invented the absurd assertion made by Democratic politicians a few years ago that 'the national debt doesn't matter because we owe it to ourselves' should ponder these figures. They mean that every man, woman, and child in the United States paid out $42.18 just for the carrying charge on the debt, which does not reduce the debt itself. And interest rates are rising so that per capita interest charges in the future will be more."

EDITORIAL STATEMENT,
Los Angeles Times.

OUT OF THE MAILBAG

Florida Phone Facts

WITH respect to your September 1, 1955, issue, in the article "Florida's Phenomenal Phone Progress," there are statements of fact which need further explanation.

"The new motel," to which reference was made, has been in business for at least two years. It does lie in Southern Bell territory, but the logical hookup and community of interest is not in Havana, the Southern Bell exchange, but Quincy, an exchange operated by the Quincy Telephone Company. Southern Bell offered to cede this territory to the independent company, but the management of that company refused to accept the responsibility for serving that area, wanting to provide service for only that motel on a foreign exchange basis, a service for which no provision had been made in their general tariffs. As a result, that motel is still without telephone service and will continue to be without service . . .

The "thinnest" telephone territory may be that of the Molino Telephone Company, but instead of the thirteen subscribers, as reported in the article, that company has a modern, up-to-date 300-line dial unit serving some 200 subscribers. The recent rate increase was based on a need to provide a fair rate of return on the investment, not on any grouping basis, and no survey was made by this commission's engineers.

The Rural Electrification Administration has not played an important rôle in the development of the smaller exchanges. True, the Florala Telephone Company, with some 12 per cent of its subscribers located in Florida, did receive an REA loan, but the Southland Telephone Company is an investor-owned company, not an REA borrower.

Our past experience with REA has been most unsatisfactory, but more recently approved REA loans may tell a different story —we hope. The one classic REA blunder, to which we often refer, is one in which the investment is closer to $1,000 per station rather than to $900, and that company is now operating at the rate of $1,000 per month in the red with about the highest rates in this state. As for the held orders, the article states that this commission has a total of just under 20,000. As a matter of fact, the Southern Bell alone reported as of July 31, 1955, its total number of held orders as 30,854. The total of held orders within the state as of July 31, 1955, was between 55,000 and 60,000.

Far be it from this commission to detract one iota from the tremendous job the Southern Bell and the independent companies have done, but neither is it the desire of this commission to give anyone the impression that the job has been completed.

—P. M. SCHUCHART,
Director, public utilities department, Florida Railroad and Public Utilities Commission.

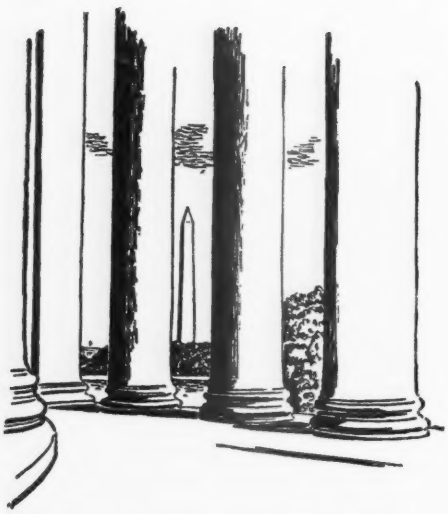
Oregon and New York Power

I DOUBTLESS am joining with others in writing to protest the fantastically incorrect electric power figures quoted from Grange Master Smith of New York, page 199 of the August 4th FORTNIGHTLY.

Here [in Oregon] where two companies are centered that supply electricity at very nearly the lowest rate in the United States, with over-all average now of one cent a kilowatt-hour, we do not care to see some agency publicized as selling at one-fiftieth such average.

Second error, of course, is where residential use of Niagara power is said to average 2,685 kilowatt-hours *per month.* Here where such annual average is about "tops" at or above 7,000 kilowatt-hours *a year,* challenge of the foregoing "monthly" figure just naturally must be made.

—ERNEST C. POTTS,
Associate editor, Oregon Voter.



Washington and the Utilities

Hell's Canyon in the News

THE Federal Power Commission has refused to reconsider its decision to license construction of three Snake river dams by Idaho Power Company, and supporters of a federal Hell's Canyon dam immediately promised a court appeal which might delay construction on the site for many months.

Idaho Power Company, ready to go ahead, reiterated its intention to move as rapidly as possible toward construction of the first two of the dams—Brownlee and Oxbow—despite the threat of litigation. T. E. Roach, Idaho Power Company president, insists that his company anticipates "no difficulty at all in our financing, notwithstanding the possibility of appeal."

Actual denial of the request for rehearing, which had been filed by the National Hells Canyon Association, eight public utility districts of Washington state, and the National Rural Electric Co-operative Association, was a formality generally anticipated by both sides. Neither expected the FPC would reverse itself on a matter it has had ample time to examine from every angle before it handed down a decision.

The Idaho Power Company had changed plans for the three dams it proposes to build in the Hell's Canyon stretch of the Snake river between Idaho and Oregon. Final designs filed with the Federal Power Commission call for rock-filled dams with impervious clay cores instead of rock-filled structures with concrete facings as originally planned. The designs are subject to approval by engineers of the FPC, which has approved Idaho Power's license applications for the projects.

The drawings were submitted for the Brownlee and Oxbow projects. A. C. Inman, Idaho Power vice president, said in an accompanying letter that plans for a low dam in Hell's canyon are being prepared and would be sent along "shortly."

ON October 9th, Idaho Power Company announced placement of orders totaling $13,620,000 for equipment required by its Brownlee and Oxbow hydroelectric projects on the Snake river. President Roach said savings varying from 30 to 45 per cent of previously estimated costs have been effected in the orders due to "keen competition by manufacturers."

"Cost estimates for electrical machinery

which we submitted to the Federal Power Commission were based upon suppliers' quotations then current," Roach said. "During the commission hearings these estimates were frequently criticized as being too low, but quite the contrary is true. They now prove to have been conservative." He said Westinghouse Electric Corporation had been awarded a contract for eight generators, four for each of the projects. The General Electric Company will supply transformers and switching equipment comprising the bulk of the other items ordered at this time.

"We want to have the projects in operation as rapidly as possible to provide much-needed kilowatts for Idaho, Oregon, and the Pacific Northwest," he said. "Fitting the manufacturer of major electrical machinery into future production schedules at this time assures the company of prompt delivery at anticipated dates of installation."

Initially, the three installations will provide nearly 800,000 kilowatts of power capacity, Roach said, but the additional generators which can be added later bring the ultimate capacity to 1,175,000 kilowatts.

As matters now stand, however, in Hell's Canyon there is no authority or precedent to prevent the company from going ahead with actual construction after the FPC has OK'd the drawing. That is assuming, of course, that the company is ready, willing, and able to go ahead.

Formal Public Power Debate

IN the old-style tradition of the Lincoln-Douglas debates on the slavery issue before the Civil War, a lively exchange of views on public platforms at the grass-roots level has been attracting wide attention in the Pacific Northwest.

Some real light was shed on the workings of the private *versus* public power development conflict in the Pacific Northwest when Represenative Coon (Democrat, Oregon) and Senator Neuberger (Democrat, Oregon) had completed their present series of public debates on the issue. By the end of the series, the two Oregon Congressmen had appeared before their constituents on ten different occasions to air opposing ideas on the desirability of the so-called "partnership policy" of allowing private companies and local public agencies to participate in federal dam projects. The formal subject of the debate was: "Agreed that the John Day dam bill (HR 5789, sponsored by Coon) is in the public interest."

With both protagonists on the same platform, voters of the area had an unusual opportunity to appraise the relative contentions of federal public power enthusiasts and the private enterprise exponents. They may also be able to penetrate some of the confusion caused by extravagant claims made over recent years by advocates of federal development of Hell's Canyon, John Day, and other undeveloped sites. The most telling point made by Representative Coon was the plain fact that Congress has consistently refused in recent years to allocate sufficient federal funds to keep up with the increasing power needs of the area.

Gas Production Declining?

DR. JOHN D. BOATWRIGHT, an executive of Standard Oil Company of Indiana, insists that the threat of FPC control over independent natural gas production is already causing diminution of the supply for public service distribution. Boatwright told a meeting of the Texas Mid-Continent Oil and Gas Association in Dallas that proof of this fact is already accumulating. According to his statistics,

new commitments of natural gas to interstate pipelines have fallen off sharply, fewer gas wells are being drilled, and funds for natural gas development have been less available than heretofore.

The gas industry economist put forward a program which he hoped would push back the "lengthening shadows" of federal government intervention in the producing and gathering phases of the industry. He asked for better representation of the industry to the public and government bodies, a proper presentation of its economic facts, and recognition of the fact that "what we do or do not do in our business does affect the public welfare."

The status of legislative efforts to free independent natural gas producers from FPC regulation was also scheduled to get a good going over at another oil industry meeting, to be held in St. Louis later this month. This is the annual convention of the Independent Petroleum Association of America (meets October 31st and November 1st), which about a thousand oil and gas production people are expected to attend. The president of the association, W. M. Vaughey, and chairman of the association's natural gas committee, Clarence T. Smith, are slated to give a report on the controversial Harris Bill, which passed the House of Representatives last spring by a narrow margin and is now awaiting action in the U. S. Senate when Congress meets next January.

THE FPC has ended its hearings on the proposal to import 300,000,000 cubic feet of natural gas from Canada for use mainly in the Pacific Northwest. Charles McGee, counsel for the Pacific Northwest Pipeline Corporation, which wants to import the gas, asked that the full commission decide the issue as soon as possible without waiting for a recommendation by the hearing examiner. He said this would speed construction involved in the project.

Hearing Examiner Glen Law said he would refer the request for a speed-up to the commission. The hearing also involved the application of the El Paso Natural Gas Company to expand its transmission facilities by another 450,000,000 cubic feet a day, mainly to serve California distribution markets.

REA Boss Hits Report

A DISSENT from the recommendations of the Hoover Commission on government reorganizatoion in so far as they apply to the Rural Electrification Administration was voiced by Ancher Nelsen, REA Administrator, in a speech at the recent regional REA co-op meeting in St. Louis, Missouri.

Addressing a regional meeting of the National Rural Electric Co-operative Association, Nelsen said that if the Hoover Commission's recommendations were adopted, the objectives set by Congress for rural electrification and rural telephony could not be accomplished. The recommendations, briefly, were to merge the REA into the private enterprise system and make it independent of loans from the government. It was estimated the government could recover more than $2 billion in funds now tied up in REA undertakings.

Nelsen expressed agreement with a similar dissent voiced by Attorney General Herbert Brownell, Jr., to the effect that the recommendations concerning REA were made without enough study to determine the effect which such recommendations would have on the REA. At the same time, Nelsen said REA policy with respect to loans to generating and transmission co-operatives for building power plants and lines was to lower costs to the consumer, reduce initial investment, and cut operating costs.

Wire and Wireless Communication

USITA Meeting

WITH a record-breaking attendance, estimated at 3,000, the United States Independent Telephone Association conducted its fifty-eighth annual convention at the Conrad Hilton hotel in Chicago October 10th to 12th. Reflecting unusual interest in merchandising activities as well as internal alignment of some independent corporate relationships—together with the fact that there will be no intervening spring conference for company executives as in former years—the independent telephone branch of the industry turned out in force for the national conclave in Chicago.

Presiding at the meeting was the retiring president of the association, Donald H. Campbell, president of the Rochester (New York) Telephone Corporation. Campbell stressed the dynamic growth of the national population, particularly in the areas served by independent companies. He told his audience that it must prepare to meet a challenge of unprecedented demand, not only for service, but for new types and different kinds of service resulting from modern technology.

Focusing on problems of the next ten years, Mr. Campbell stated:

> In the final analysis, we must face the basic business challenge of the future, which I repeat is—a growing America and a growing telephone subscriber public which is multiplying faster than the population itself. For this we are going to need new and more plant. We are going to have to plan expenditures for high-priced equipment and high-priced construction. More than that, to serve this new America of the future, we are going to have to have new and better service. These future subscribers will not accept obsolete telephone service.
>
> In this era of de luxe service, it is only to the extent that our companies can command the confidence of both the subscribing public and the investing public that they can do their job. The responsibilities are great, but the rewards should be commensurate. I have never been convinced that the American public expects to receive a quality of service or a quantity of service which is higher than that same public is willing to pay for, under a fair and reasonable system of rates. We in the telephone industry are still in the fortunate position of selling a service which is far more valuable than it costs the customer to enjoy, by any standard of measurement. . . .

ANOTHER featured speaker at the telephone meeting was a nationally

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known executive of a sister utility industry, C. Hamilton Moses, chairman of the board of the Arkansas Power & Light Company. Mr. Moses spoke to the telephone people about their "date with destiny." He likewise stressed the unlimited responsibility and opportunities of American business, particularly in the utility field. He referred to the experience of his own company in Arkansas in rallying public opinion to recognition of the fact that private industry could build a better prosperity at the local level than any federal authority.

He pointed to the problems, which the electric utilities had to lick in meeting the challenge of rural service, with its adverse political implications for the private utility industry. He likewise stressed the idealistic values of business which are so frequently overlooked even by businessmen themselves. He stated on this point:

> I wonder if we are selling too much the bigness of business rather than the goodness of the business? I wonder if we are selling too much our profits from the business rather than its benefits to the citizen? Mr. Average Citizen hears about one company doing a $10 billion business in one year—about top executives drawing tremendous salaries. Is it not natural for him to ask—Am I getting my share of all this prosperity? If these big folks do not care about us average citizens, will we have to use our own power?
>
> I wonder if any company represented here would even consider giving a job to a man over forty-five years old? I wonder if anyone here will consider working out some job for any of our physically handicapped—or do we just turn them out on a cold world, and then complain because we have to pay taxes for old-age pensions?
>
> When any nation values anything more than a deep and abiding interest in the welfare of its citizens, its future is insecure. We cannot continue to compromise. We cannot take a half-loaf. This policy brought Europe to Munich and America to war. Democracy means nothing to a hungry man. Economic freedom starts and stops with a job. To be politically free, man must be economically free, and that depends on you. Our democracy will work for us when we work for our democracy.

The executive secretary, Clyde S. Bailey, made a report of the activities of the association during the past year, covering such matters as minimum wage legislation, highway relocation costs, small security issue registration exemption, and other miscellaneous matters of special interest to the independent telephone companies.

Mr. Bailey specifically referred to a policy victory for the telephone industry in a decision of the Federal Communications Commission requiring the state of California to give up the use of certain radio frequencies for a state-owned communications service disseminating agricultural information, in view of the fact that common carriers (telephone companies) could easily and quickly render such service to the state.

Much interest was displayed by the independent telephone men in the thought-provoking account of the Bell system's new emphasis on "merchandising." This was contained in a talk by B. T. Miller, vice president of the American Telephone and Telegraph Company, in charge of its new merchandising department. Mr. Miller pointed out that the immediate unprecedented postwar demand for telephone service is being rapidly satisfied by new plant construction, expansion, and im-

provements. The industry must now look to better ways and means of selling its service in what is rapidly becoming a consumer market. His references to various telephone devices and service improvements now available or in prospect, suggested that the telephone business is becoming an appliance industry, just as the gas and electric utility business has long been regarded.

WU Objects to Hawaiian Service Complaint

WESTERN UNION TELEGRAPH COMPANY asked the FCC recently to restrict the American Telephone and Telegraph Company to telephone service on its proposed $35,000,000 cable system to Hawaii. The petition said if the system is to handle telegraph service, AT&T should be required to lease a portion of it to the "record communications carriers" to handle this business.

The petition said the FCC was inconsistent in issuing a permit to AT&T on September 8th for twin cables from Reyes, California, to Hawaii. It claimed this will place AT&T into international telegraph operations in the face of a congressional order to Western Union to divest itself of such operations.

Western Union described AT&T as a major telegraph carrier and said it seemed inconceivable that the commission would place the company in the international telegraph business "in further defiance of congressional policy." When Congress authorized Western Union to absorb Postal Telegraph in 1943, it established a policy of separating domestic and international telegraph operations, the petition said.

Western Union contended that United States-Hawaii service is international under existing provisions of the Communications Act. Western Union does not now serve Hawaii. Radio-telegraph service to the islands is provided by RCA Communications, Mackay, and Globe Wireless.

The FCC authorized the 2,000-mile Hawaiian cables after being advised by the Office of Defense Mobilization that they are vital to the national defense.

Wilson Supports SAGE

CONTROLLER General Joseph Campbell has received a lengthy letter from Charles E. Wilson backing the Air Force's plan to contract for a communications network for an air defense project. The project, Semiautomatic Ground Environment System, is known as SAGE.

Campbell had ruled on August 15th that the Air Force could not contract for the network with private telephone companies in advance of specific congressional authority or appropriations. On September 20th Representative John D. McCormack (Democrat, Massachusetts), majority floor leader in the House, made public Mr. Campbell's ruling. Mr. McCormack at that time charged the Air Force with "disregard of constitutional government."

The urgency with which the Air Force views the project was indicated by the fact that Mr. Wilson, the Secretary of Defense, rather than the Secretary of the Air Force, argued the case to Mr. Campbell. If the Controller General does not reverse his ruling, construction of the SAGE communications system will be set back by as much as a year.

SAGE is a project designed to shorten the time interval between discovery of an attacking enemy aircraft and the use of planes and missiles to bring it down. Acquisition of land, construction of buildings, procurement of "electronic brains," and the weapons themselves all have been specifically approved by congressional appropriations.

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Financial News and Comment

By OWEN ELY

The Bull Market Falters

THE announcement of President Eisenhower's heart attack precipitated the sharpest day's decline in the history of the stock market since 1929, on September 26th. The two following Mondays also proved adverse, with the results shown in the table on page 731, as measured by the Dow-Jones averages.

Efforts to pinpoint the sources of the selling must await a careful investigation by the SEC, the Stock Exchange, or the Fulbright Committee. It is rumored that there has been considerable liquidation from England, brought about no doubt by that government's policy of "tightening up" its economy in order to bolster the position of the pound and of the British Exchequer. With brokers' margin accounts in relatively strong position (though this may be less true of bank loans on securities, which are not subject to the same restrictions) there has apparently not been much forced selling of the kind which undermined the 1929 market. There is said to be some institutional buying on the way down, but not on a substantial scale. The specialists on the exchanges, under the direction of the governors, have temporarily provided markets during the worst of the selling but doubtless liquidated on rallies.

The two-year "Eisenhower market," dating from September, 1953, had been almost uninterrupted except for modest setbacks in March and August of this year. Recent liquidation has canceled the August-September advance and somewhat more. At this writing the chances seem favorable that, even though the bull market may not be really ended, the present decline will run somewhat further.

BASED on the Dow-Jones industrial average, the stock market advanced from a low of 93 in 1942 to a recent high of 487, or a gain of 424 per cent. This compares with the advance from 65 to 389, or nearly 500 per cent, in the bull market of 1921-29. Moreover, the recent bull market did not reach the excesses of the 1929 market with respect to high price-earnings ratios and low yields. In September this year the yield differential be-

DEPARTMENT INDEX

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tween bonds and common stocks dropped to about .75 per cent, but in 1929 stock yields were less than the bond average. Many utility holding company stocks sold at fantastic price-earnings multiples. In the present market utilities have been giving investors better yields than industrial stocks, as a rule, and P-E ratios have been quite reasonable except perhaps for a few "growth" stocks.

The Fast Breeder Power Reactor

ATOMIC POWER DEVELOPMENT ASSOCIATES, INC., is a nonprofit corporation headed by Detroit Edison, its membership including 24 electric power systems mainly in the New England, Middle Atlantic, and Central industrial areas, as well as Southern Services, Inc., seven engineering companies, and the Ford Motor Company. The AEC on August 8th approved Associates' plan for a 100,000-kilowatt "developmental fast breeder power reactor" at Monroe, Michigan, expected to be ready for operation by late 1959.

The AEC has now apparently removed some of the bars to publication of technical details of new atomic power projects, and Atomic Power Development Associates has issued an interesting 11-page brochure with charts and tables. Estimated cost of plant is given in the table on page 732. (A second column has been added showing cost per kilowatt.)

Nuclear Power Associates (headed by Commonwealth Edison) have estimated that their 180,000-kilowatt plant, to be built by General Electric in Illinois for operation in 1960, will cost an estimated $45,000,000 or only about $250 per kilowatt. Why the big difference in cost as compared with the Michigan breeder reactor? Details do not seem available for the Commonwealth plant, but it is possible that the $250 per kilowatt does not include the items for research and development, personnel training, test operation, etc., that make up a substantial proportion of the cost of the Michigan breeder reactor. The latter's high cost is also explained by the statement that "because of the state of development of fast reactors and the use of sodium as a coolant, the reactor has been conservatively designed. Safety has been emphasized even at the sacrifice of performance."

UNFORTUNATELY, the brochure on the Michigan plant does not present any estimates of the operating cost to produce one kilowatt-hour. However, the writer has heard an informal estimate that overall cost may be as low as five mills, which presumably includes capital costs. This would compare with the 6-7 mills (with 100 per cent load factor) estimated by General Electric for its dual-cycle boiling reactor to be constructed for Commonwealth Edison. (See FORTNIGHTLY, September 1st, pages 330-35.) In fact, it has been intimated that the breeder reactor may even be able to compete with hydro power on a cost basis. But it must be kept in mind that this reactor is dependent on the AEC not only for purchase of enriched uranium but also for the sale of the plutonium by-product, the proceeds of which doubtless largely offset the cost of

	Percentage Declines			*Net Decline*
	September 26th	*October 3rd*	*October 10th*	*September 26th-October 10th*
Industrial Average..	6.5%	2.3%	2.9%	8.9%
Rail Average.....	6.8	2.2	3.1	10.9
Utility Average.....	3.8	1.2	1.4	5.8

the uranium. Thus, fuel expense is probably even lower than the 1½-2 mills per kilowatt-hour estimated by GE for its reactor, which may explain the low over-all cost estimate.

More about Atomic Power From Fusion

FOLLOWING the episode at the Geneva Conference where the Indian delegate, Dr. Bhabha, raised the question of atomic power being produced from the fusion of hydrogen atoms, Chairman Strauss of the Atomic Energy Commission has revealed that work has been under way in this country since 1951 and now constitutes a large-scale project. "Our work is in the research stage," he stated, "and many years of intensive effort may be required before the first prototype of an operating thermonuclear machine may be developed."

The essential problem is that of heating some nuclear material low in the atomic scale, such as deuterium or heavy water, to a temperature of several hundred million degrees and of confining it at that temperature for a sufficiently long period of time (probably measured in millionths of a second) to allow the atomic nuclei to fuse together into an atom higher in the atomic scale, with an accompanying release of energy in the form of energetic neutrons and charged particles. Apparently there has been no official comment as yet on speculation in the press that the required high temperature might be produced by exploding a small wire through forcing a high-voltage electric current through it. Another suggested method, involving the use of elaborate cyclotrons, such as the one in Brookhaven, would seem much more cumbersome and expensive.

The new project has apparently been developed with much the same effective secrecy as accompanied the original Manhattan project for the atomic bomb during wartime days. The AEC has now revealed that varied research projects are under way at the University of California, the Los Alamos Scientific Laboratory in New Mexico, Oak Ridge National Laboratory, Princeton University, New York University, etc.

THE huge scope of the project and the large amounts now being spent seem indicated by a description of the work at Los Alamos, where the first definitive program got under way in January, 1952. By now, "the names of individuals are too many to give in detail. . . . electric computing machines are in extensive use. The Los Alamos branch of the Sherwood project has been very fortunate in capturing the interest of many brilliant scientists from universities in all parts of the country. . . . Since hydrogen bombs exist, the study of the controlled release of thermonuclear energy might be associated in the public

	Total Cost	*Cost Per Kilowatt*
Reactor and Components	$23,313,000	$233
Site Improvement (without Charge for Land)	400,000	4
Turbine-Electric Generating Facilities	14,061,000*	141
Research and Development	9,000,000	90
Personnel Training and Test Operation	2,275,000	23
Other Expenses Including Interest during Construction	5,523,000	55
Total Project Cost	$54,572,000	$546

* Owned by Detroit Edison.

mind with such hazards as tremendous explosions, that can be restrained only with difficulty. No such hazards seem to be present. The main problem seems likely to be that of getting enough thermonuclear energy back from the material, heated to more than 100,000,000 degrees, to repay the power used to achieve and maintain this high temperature."

The major reason for this great expenditure of time and money by the government is presumably because of the inexhaustible nature of the fuel and its relatively moderate cost as compared with that of uranium and thorium. Deuterium is present in ocean water in the ratio of about one particle out of 6,400. Professor Spitzer of Princeton has stated "the deuterium in the ocean waters is sufficient to provide many times the present rate of world energy consumption for more than a billion years."

THE difference between "fission" and "fusion" was explained in the October 3rd AEC press conference, with charts to illustrate the atomic actions involved. (See pages 5-6 of the AEC release.) The energy obtainable from the interaction of individual atoms of deuterium and tritium (forms of heavy hydrogen) was said to be some 4-17,000,000 electron volts. There is no radioactive fall out or residue with fusion, as there is with fission, although shielding to protect from radiation effects would still be necessary.

IN reply to a question as to what the future discovery of a practical method of harnessing fission would do to the rather heavy investment in atomic reactors, Admiral Strauss made the following statement:

> Since this is such a long-range project I believe every dollar that is invested in an atomic reactor will have been amortized long before this is either found to be feasible or infeasible. I might add that one of the considerations involved in security on this was some apprehension that private capital might assume that this was more imminent than it is. I know from the fact that I dealt in private capital for most of my life that capital is timid. I have been very happy to see the way this has been handled and the intelligent way it has been examined by those who are advising private capital—that it has had no adverse effect. It is important to emphasize its very long-range and tentative aspects.

CURRENT YIELD YARDSTICKS

	*October 7, 1955**	*1955 Range*		*1954 Range*		*1953 Range*	
		High	*Low*	*High*	*Low*	*High*	*Low*
U. S. Long-term Bonds—Taxable	2.85%	2.95%	2.62%	2.70%	2.41%	3.15%	2.70%
Utility Bonds—Aaa.....	3.15	3.19	2.93	3.13	2.86	3.43	3.01
Aa.....	3.19	3.22	2.99	3.19	2.92	3.59	3.07
A.....	3.27	3.28	3.12	3.37	3.11	3.72	3.23
Baa.....	3.47	3.48	3.37	3.72	3.37	3.94	3.50
Utility Preferred Stocks—							
High-grade	3.96	3.98	3.89	4.09	3.85	4.45	4.01
Medium-grade .	4.28	4.32	4.19	4.51	4.17	4.87	4.43
24 Electric Utility Common Stocks ..	4.55	4.58	4.32	5.23	4.50	5.72	5.01
30 Gas Utility Common Stocks	4.52	4.70	4.29	5.22	4.64	5.66	4.74

* Approximate date.

Latest available Moody indices are used for utility bonds and stocks; Standard & Poor's index for government bonds.

XUM

PUBLIC UTILITIES SECURITIES
OFFERED FOR SUBSCRIPTION AND/OR SALE
(000 omitted)

	January 1 to September 30, 1955						January 1 to September 30, 1954				
	Total	Electric Companies	Gas Companies	Telephone Companies	Other Companies	Total	Electric Companies	Gas Companies	Telephone Companies	Other Companies
Long-Term Debt										
Offered Publicly	$ 896,507	$ 592,500	$140,507	$ 155,500	$ 8,000	$1,950,650	$1,047,700	$551,450	$351,500	-
Offered through Subscription	678,403	31,737	3,500	637,166	-	95,350	45,350	50,000	-	-
Offered Privately	396,530	67,150	217,680	90,350	21,350	256,830	123,100	86,130	29,950	$17,650
Total	$1,971,440	$ 691,387	$361,687	$ 881,016	$29,350	$2,302,830	$1,216,150	$687,580	$381,450	$17,650
Preferred Stock										
Offered Publicly	$ 197,050	$ 112,425	$ 51,000	$ 27,700	$ 5,925	$ 383,156	$ 332,879	$ 29,810	$ 17,899	$ 2,608
Offered through Subscription	23,243	23,243	-	-	-	5,042	5,042	-	-	-
Offered Privately	40,200	20,750	10,000	2,250	7,200	59,044	46,650	1,244	6,000	5,150
Total	$ 260,493	$ 156,418	$ 61,000	$ 29,950	$13,125	$ 447,242	$ 384,571	$ 31,054	$ 23,899	$ 7,758
Common Stock										
Offered Publicly	$ 182,955†	$ 90,660	$ 78,353†	$ 7,762	$ 6,180	$ 162,184	$ 95,599	$ 46,663	$ 19,662	$ 300
Offered through Subscription	349,150	140,440	119,155	84,225	5,631	300,526	242,734	15,842	41,950	-
Total	$ 532,105	$ 231,100	$197,507	$ 91,987	$11,811	$ 462,710	$ 338,353	$ 62,505	$ 61,562	$ 300
Total Financing	$2,764,338	$1,084,905	$620,194	$1,004,953	$54,286	$3,212,792	$1,939,074	$781,139	$466,871	$25,708
SEGREGATION OF FINANCING - BY PURPOSE										
Total Refundings	$ 229,972	$ 129,348	$ 29,257	$ 71,367	-	$ 668,144	$ 481,981	$173,274	$ 2,889	-
Total Divestments	$ 66,919	$ 3,150	$ 60,589	-	$ 3,180	$ 49,509	$ 1,926	$ 39,638	$ 7,945	-
New Money										
Long-Term Debt	$1,777,198	$ 587,387	$342,430	$ 818,031	$29,350	$1,802,158	$ 892,903	$518,950	$376,655	$17,650
Preferred Stock	217,011	139,318	41,000	23,568	13,125	286,981	227,843	30,410	20,970	7,758
Common Stock	473,238	225,702	146,918	91,987	8,631	416,000	334,421	22,867	58,412	300
Total New Money	$2,467,447	$ 952,407	$530,348	$ 933,586	$51,106	$2,505,139	$1,455,167	$568,227	$456,037	$25,708
Total Financing	$2,764,338	$1,084,905	$620,194	$1,004,953	$54,286	$3,212,792	$1,939,074	$781,139	$466,871	$25,708
SEGREGATION OF FINANCING - BY TYPE										
Competitive Bidding	$ 901,665	$ 685,871	$ 53,794	$ 154,000	$ 8,000	$1,822,427	$1,169,540	$322,887	$170,000	-
Negotiated Sales	$ 374,369	$ 109,715	$215,588	$ 36,961	$12,105	$ 673,563*	$ 306,598	$325,026	$ 39,021*	$ 2,908
Subscription										
Competitive Bidding	$ 52,648	$ 16,910	$ 35,738	-	-	$ 124,580	$ 74,580	$ 50,000	-	-
Negotiated Sales	156,046	107,308	16,444	$ 28,703	$ 3,591	104,977	89,114	1,957	$ 13,906	-
No Underwriting	842,402	77,201	70,472	692,689	2,040	171,171	129,492	13,885	27,794	-
Total Subscription	$1,051,096	$ 201,419	$122,654	$ 721,392	$ 5,631	$ 400,928	$ 293,186	$ 65,842	$ 41,900	-
Private Sales	$ 437,208	$ 87,900	$208,158	$ 92,600	$38,550	$ 315,874	$ 169,750	$ 87,374	$ 35,950	$22,800
Total Financing	$2,764,338	$1,084,905	$620,194	$1,004,953	$54,286	$3,212,792	$1,939,074	$781,139	$466,871	$25,708

* Includes $1,500,000 preferred stock not underwritten. † Includes $478,000 common stock sold privately.

Ebasco Services Incorporated, Corporate Finance Department, October 3, 1955 - CWD

In reference to the amortization of atomic reactors, Mr. Strauss indicated his opinion that this might extend over a period of some eighteen to twenty-five years.

Methods of Calculating Financial Ratios

THE Irving Trust Company has prepared a study[1] of the methods used by five organizations (Fitch, Moody's, Standard & Poor's, Bear, Stearns & Co., and Institutional Utility Service) in computing capital structure, book value, and coverage of charges.

Some questions which arise in connection with capital structure are the following: The premium on preferred stock is included in the common stock equity by all the services. Regarding bank loans due within a year, Fitch and Standard do not include this in funded debt, while Moody's, Bear, Stearns, and Institutional do so. Where a holding company is involved, subsidiary preferred stock is shown as a separate percentage of total capital, after subsidiary debt and before parent company debt, by Fitch, Moody's, Standard, and Institutional, while Bear, Stearns shows it as part of consolidated debt. Similar treatment is accorded the item "minority interest" by the various services.

Book value is computed only by Fitch and Bear, Stearns. In calculating total common stock equity, Fitch includes the reserve for contingencies, and also the insurance reserve unless this is earmarked for a particular purpose, while Bear, Stearns does not do so. Fitch adjusts figures for previous years for stock dividends of 10 per cent or more.

Standard does, however, estimate book value *excluding intangibles*. The latter include plant acquisition adjustments (net), unamortized debt discount and expense (less premium), discount on capital stock, and capital stock expense; the reserve for contingencies and the insurance reserve are usually included as part of the equity. Bear, Stearns' method of handling intangibles is similar, but it considers "other deferred debits" an intangible. Where the "reserve for deferred federal income taxes" (in connection with accelerated amortization) is shown as restricted surplus instead of as a reserve account, Fitch would exclude this item from book value if the amount involved is material, and Standard and Bear, Stearns include the item in book value.

REGARDING *coverage of interest on long-term debt,* only Standard and Institutional calculate this ratio. In figuring the ratio "before taxes," both services add back to gross income all federal income taxes, including any provision for deferred taxes. Standard credits state income taxes, but deducts miscellaneous income deductions (minor). The two services treat miscellaneous amortization and amortization of 100.5 differently, Institutional deducting them from gross income, while Standard does not. (In reports to stockholders, amortization of 100.5 is sometimes included "above the line" along with operating deductions, while in some other cases it is included among the fixed charges.)

The Irving Trust Company points out that some analysts include "other interest charges" along with interest on long-term debt in computing coverage. This would of course be necessary in a "comparison sheet" relating to the sale of debentures, although even in this case interest on bank debt might be excluded.

Coverage of fixed charges, as distinct from coverage of interest, is computed by all the services except Bear, Stearns. In calculating the ratio before taxes, Moody

[1] Prepared by Miss Walsh, staff assistant, under the direction of John F. Childs, vice president.

credits back state income taxes, the same as Standard. In general, the two services follow the same method except that miscellaneous amortization (including amortization of 100.5) is deducted by Moody's either before or after computing the ratio, depending on its treatment by the state regulatory commission, while Standard deducts it after the ratio. As Irving Trust Company points out, "there is some objection to computing times charges earned before income taxes because some of the items included in fixed charges do not have a claim which comes ahead of the income tax claim."

Fitch and Moody's compute fixed charges earned after income taxes, the methods being generally similar except that Fitch usually deducts miscellaneous amortization (including amortization of 100.5) before arriving at gross income. Moody's handles the item as described in the previous paragraph.

COVERAGE of fixed charges and preferred dividends is reported by all five services. Fitch and Moody's deduct miscellaneous income deductions (minor) from gross income after taxes, but Moody's treats amortization of 100.5 in the manner indicated above, while Fitch usually deducts it from gross income. Standard does not deduct miscellaneous amortization or amortization of 100.5, but Bear, Stearns and Institutional do so, and these services also include miscellaneous income deductions (minor) as a fixed charge.

The Irving Trust "Bulletin" does not comment on the treatment of "interest credit on construction" in connection with coverage of fixed charges. In the writer's opinion, this is an artificial account and does not have any legal significance so far as interest charges are concerned. To deduct it from the actual fixed charges tends to increase the coverage ratio abnormally in some cases. While the item is justified by the lag in obtaining earnings from new construction, it would seem better practice to place the credit in "miscellaneous income" rather than in fixed charges, since it represents theoretically allowable earnings (usually 6 per cent on new plant cost) and is not strictly an interest item. Apparently the services have not raised this issue, however.

DATA ON ELECTRIC UTILITY STOCKS

1954 Rev. (Mill.)			*10/5/55 Price About*	*Div. Rate*	*Cur. Yield*	*Share Earnings* Cur. Period*	*% Increase*	*12 Mos. Ended*	*Price-Earns. Ratio*	*Dividend Pay-out*	*Common Stock Equity*
$230	S	Amer. Gas & Elec.	43	$1.80	4.2%	$2.87**	21%	Aug.	15.0	63%	32%
35	O	Arizona Pub. Serv.	25	1.00	4.0	1.43	D1	July	17.5	70	28
9	O	Arkansas Mo. Power	24	1.24	5.2	1.65	15	June	14.5	75	30
27	S	Atlantic City Elec.	29	1.06b	3.7	1.49	12	Aug.	19.5	71	27
107	S	Baltimore G. & E.	35	1.60	4.6	1.81	NC	July	19.3	88	40
5	O	Bangor Hydro-Elec.	34	1.80	5.3	2.18	D2	June	15.6	83	33
4	O	Black Hills P. & L.	27	1.28	4.7	2.13	6	July	12.7	60	26
86	S	Boston Edison	58	2.80	4.8	3.12	5	Dec.	18.6	90	53
17	A	Calif. Elec. Power	14	.70	5.0	.84	7	June	16.7	83	35
17	O	Calif. Oregon Power	33	1.60	4.8	1.97	23	May	16.8	81	37
7	O	Calif.-Pacific Util.	33	1.40	4.2	2.20**	4	July	15.0	64	30
54	S	Carolina P. & L.	24	1.10	4.6	1.58	14	Aug.	15.2	70	32
23	S	Cent. Hudson G. & E.	16	.76	4.8	1.02	20	June	15.7	75	33
16	O	Cent. Ill. E. & G.	26	1.20	4.6	1.92	39	June	13.5	63	33
30	S	Cent. Ill. Light	51	2.20	4.3	3.10	3	Aug.	16.5	71	40
46	S	Cent. Ill. P. S.	28	1.40	5.0	2.23	38	June	12.6	63	33
10	O	Cent. Louisiana Elec.	29	1.40	4.8	1.72	17	June	16.9	81	31
30	O	Cent. Maine Power	25	1.40	5.6	2.08	12	Aug.	12.0	67	32
105	S	Cent. & South West	33	1.32	4.0	1.96	17	June	16.8	67	36
10	O	Cent. Vt. P. S.	17	.92	5.4	1.32	29	Aug.	12.9	70	29
95	S	Cincinnati G. & E.	28	1.20	4.3	1.80	10	June	15.6	67	38

1954 Rev. (Mill.)		(Continued)	10/5/55 Price About	Div. Rate	Current Yield	Share Earnings* Cur. Period	% Increase	12 Mos. Ended	Price-Earns. Ratio	Dividend Pay-out	Common Stock Equity
6	O	Citizens Utils.	16	.48h	6.0a	1.08	6	June	14.8	44	40
91	S	Cleve. El. Illum.	36	1.60	4.4	2.11	4	June	17.1	76	42
3	O	Colo. Cent. Power	25	1.20	4.8	1.64	6	June	15.2	73	39
35	S	Columbus & S. O. E.	33	1.60	4.8	2.15	15	June	15.3	74	34
310	S	Commonwealth Edison	45	2.00	4.4	2.72	14	June	16.5	74	49
10	A	Community Pub. Serv.	24	1.00#	4.2	1.78	13	June	13.5	56	49
2	O	Concord Electric	41	2.40	5.9	2.64	6	Dec.	15.5	91	63
60	O	Connecticut L. & P.	18	.98	5.4	1.13	2	Aug.	15.9	87	38
19	O	Connecticut Power	43	2.25	5.2	2.77	25	June	15.5	81	41
474	S	Consol. Edison	49	2.40	4.9	3.07	7	June	16.0	78	43
170	S	Consumers Power	49	2.20	4.5	3.12	7	Aug.	15.7	71	42
61	S	Dayton P. & L.	46	2.00	4.3	3.09	5	June	14.9	65	37
31	S	Delaware P. & L.	37	1.50	4.1	2.16	8	June	17.1	69	35
196	S	Detroit Edison	36	1.60	4.4	2.34	20	Aug.	15.4	68	45
113	A	Duke Power	52	2.00	3.8	3.26	2	June	16.0	61	53
81	S	Duquesne Light	36	1.80	5.0	2.17	1	June	16.6	83	35
27	O	Eastern Util. Assoc.	36	2.20	6.1	2.42	9	July	14.9	91	36
2	O	Edison Sault Elec.	16	.80	5.0	1.13	26	June	14.2	71	49
10	O	El Paso Elec.	41	1.60	3.9	2.35	6	July	17.4	68	37
10	S	Empire Dist. Elec.	29	1.40	4.8	1.91	D9	June	15.2	73	31
4	O	Fitchburg G. & E.	54	3.00	5.6	3.26	16	Dec.	16.6	92	53
38	S	Florida Power Corp.	40	1.60	4.0	2.07	10	June	19.3	77	28
79	S	Florida P. & L.	35	1.00	2.9	1.83	32	June	19.1	55	38
163	S	General Pub. Util.	37	1.80	4.9	2.57	10	June	14.4	66	39
6	O	Green Mt. Power	32	1.80	5.6	2.34	22	Aug.	13.7	77	39
47	S	Gulf States Util.	35	1.40	4.0	2.06	11	Aug.	17.0	68	30
20	A	Hartford E. L.	58	2.75	4.7	3.86	16	June	15.0	71	47
5	O	Haverhill Elec.	41	2.15†	5.2	1.95	D35	Dec.	21.0	110	100
58	S	Houston L. & P.	41	1.20	2.9	2.31	15	Aug.	17.7	52	40
7	O	Housatonic P. S.	24	1.40	5.8	1.58	20	Dec.	15.2	89	46
23	S	Idaho Power	28	1.10	3.9	1.80	5	June	15.6	61	35
70	S	Illinois Power	53	2.60	4.9	3.32	29	July	16.0	78	35
37	S	Indianapolis P. & L.	29	1.40	4.8	1.81	13	June	16.0	78	35
18	S	Interstate Power	15	.74	4.9	1.00	8	June	15.0	74	30
27	O	Iowa Elec. L. & P.	25	1.25	5.0	1.94	15	Aug.	12.9	64	33
31	S	Iowa-Ill. G. & E.	34	1.80	5.3	2.32	16	Aug.	14.7	78	40
31	S	Iowa Power & Lt.	28	1.40	5.0	1.89	3	June	14.8	74	31
27	O	Iowa Pub. Service	16	.80	5.0	.92	—	Aug.	17.4	87	33
12	O	Iowa Southern Util.	23	1.20	5.2	1.63	16	Aug.	14.1	74	35
51	S	Kansas City P. & L.	41	1.80	4.4	2.25	12	Aug.	18.2	80	32
25	S	Kansas G. & E.	27	1.20	4.4	1.94	4	Aug.	13.9	62	26
36	S	Kansas Pr. & Lt.	23	1.20	5.2	1.53	7	June	15.0	78	26
35	O	Kentucky Util.	27	1.28	4.7	2.16	26	June	12.5	59	34
6	O	Lake Superior D. P.	23	1.10	4.8	1.45	3	June	15.9	76	37
5	O	Lawrence Elec.	29	1.60	5.5	1.40	D25	Dec.	20.7	114	63
77	S	Long Island Ltg.	21	1.00	4.8	1.17	NC	Aug.	17.9	85	32
41	S	Louisville G. & E.	53	2.00	3.8	3.67	15	June	14.4	54	35
7	O	Lowell Elec. Lt.	58	3.30†	5.7	3.04	D19	Dec.	19.1	109	65
8	O	Lynn G. & E.	29	1.60	5.5	2.01	D7	Dec.	14.4	80	75
7	O	Madison G. & E.	43	1.60	3.7	3.20	2	Dec.	13.4	50	53
3	A	Maine Pub. Service	19	1.08	5.7	1.42	13	Aug.	13.4	76	35
4	O	Michigan G. & E.	43	1.35h	6.1a	3.43	12	June	12.5	39	31
144	S	Middle South Util.	31	1.50	4.8	2.17	7	Aug.	14.3	69	35
24	S	Minnesota P. & L.	25	1.20	4.8	1.89	6	Aug.	13.2	63	35
2	O	Miss. Valley P. S.	29	1.40g	4.8	2.47	9	Aug.	11.7	57	30
10	A	Missouri Pub. Ser.	13	.60	4.6	.80	D13	Aug.	16.3	75	29
5	O	Missouri Util.	29	1.36	4.7	1.84	14	June	15.8	73	36
31	S	Montana Power	40	1.60	4.0	2.87	9	Aug.	13.9	56	34
122	S	New England Elec.	17	.90	5.3	1.20	5	June	14.2	75	34
38	O	New England G. & E.	18	1.00	5.6	1.26**	D5	Aug.	14.3	79	35
43	O	New Orleans P. S.	46	2.25	4.9	2.69	3	July	17.1	84	39
2	O	Newport Electric	43	2.00	4.7	2.60	5	Aug.	16.5	77	34
73	S	N. Y. State El. & Gas	40	2.00	5.0	2.88	10	Aug.	13.9	69	36
210	S	Niagara Mohawk Pr.	32	1.60	5.0	2.19	7	July	14.6	73	34
68	O	Northern Ind. P. S.	38	1.80	4.7	2.76	20	Aug.	13.8	65	35
118	S	Northern Sts. Power	18	.80	4.4	1.13	10	June	15.9	71	33

1954 Rev. (Mil.)		(Continued)	10/5/55 Price About	Div. Rate	Current Yield	Share Earnings* Cur. Period	% Increase	12 Mos. Ended	Price-Earns. Ratio	Dividend Pay-out	Common Stock Equity
9	O	Northwestern P. S.	17	.90	5.3	1.34	10	June	12.7	67	27
110	S	Ohio Edison	49	2.20	4.5	3.39	16	Aug.	14.5	65	42
40	S	Oklahoma G. & E.	37	1.60	4.3	2.20	28	Aug.	16.8	73	30
14	O	Otter Tail Power	30	1.60	5.3	2.02	4	Aug.	14.9	79	35
386	S	Pacific G. & E.	49	2.20	4.5	3.18	18	June	15.4	69	39
40	O	Pacific P. & L.	27	1.30	4.8	1.58	D3	May	17.1	82	29
109	S	Penn Power & Lt.	48	2.40	5.0	3.05	8	July	15.7	79	29
196	S	Phila. Elec.	39	1.80	4.6	2.26	4	July	17.3	80	39
29	O	Portland Gen. Elec.	25	1.10	4.4	1.62	18	Aug.	15.4	68	40
52	S	Potomac Elec. Power	23	1.00	4.3	1.22	10	Aug.	18.9	82	36
63	S	Pub. Serv. of Colo.	44	1.80	4.1	2.37	11	June	18.6	76	35
250	S	Pub. Serv. El. & Gas	32	1.60	5.0	2.19	27	June	14.6	73	31
62	S	Pub. Serv. of Indiana	41	2.00	4.9	2.41	3	July	17.0	83	34
23	O	Public Serv. of N. H.	17	.90	5.3	1.36	36	Aug.	12.5	66	33
10	O	Public Serv. of N. M.	14	.68	4.9	.95	37	June	14.7	72	31
21	S	Puget Sound P. & L.	38	1.72	4.5	2.20	15	July	17.3	78	58
49	S	Rochester G. & E.	46	2.24	4.9	3.22	2	June	14.3	70	32
14	O	Rockland L. & P.	20	.60	3.0	.83	36	Dec.	24.1	72	29
7	S	St. Joseph L. & P.	25	1.32	5.3	1.74	1	June	14.4	76	41
39	S	San Diego G. & E.	19	.80	4.2	.97	D10	July	19.6	82	44
8	O	Sierra Pacific Pr.	23	1.12	4.9	1.50	38	July	15.3	75	28
154	S	So. Calif. Edison	50	2.40	4.8	3.10	22	June	16.1	77	36
34	S	So. Carolina E. & G.	18	.90	5.0	1.31	17	June	13.7	69	28
6	O	Southern Colo. Power	16	.70	4.4	1.25	2	May	12.8	36	41
194	S	Southern Company	20	.90	4.5	1.38	10	Aug.	14.5	65	29
14	S	So. Indiana G. & E.	32	1.50	4.7	2.33	12	Aug.	13.7	64	34
4	O	So. Nevada Power	18	.80	4.4	1.36	2	June	13.2	59	64
1	O	Southern Utah Pr.	15	1.00	6.7	.91	3	July	16.5	110	39
3	O	Southwestern E. S.	21	1.08	5.1	1.65	9	May	12.7	61	31
33	S	Southwestern P. S.	26	1.32	5.1	1.55	8	July	16.8	85	30
20	A	Tampa Elec.	26	1.00	3.8	1.50	18	July	17.3	67	38
117	S	Texas Utilities	72	2.32	3.2	4.11	17	Aug.	17.5	56	36
35	S	Toledo Edison	16	.70	4.4	1.04	20	June	15.4	67	30
11	O	Tucson G. E. L. & P.	28	1.04	3.7	1.72	16	June	16.3	60	40
114	S	Union Elec. of Mo.	29	1.40	4.8	1.69	14	June	17.2	83	36
28	O	United Illuminating	51	2.55†	5.0	3.13	8	Dec.	16.3	81	51
4	O	Upper Peninsula Pr.	26	1.40	5.4	2.22	1	June	11.7	63	31
32	S	Utah Power & Lt.	47	2.20	4.7	3.24	25	Aug.	14.5	68	41
96	S	Virginia E. & P.	39	1.60	4.1	2.51	29	Aug.	15.5	64	36
23	S	Wash. Water Power	37	1.70	4.6	1.99	8	Aug.	18.6	85	35
116	S	West Penn Elec.	26	1.30	5.0	1.99	10	Aug.	13.1	65	28
64	O	West Penn Power	49	2.40	4.9	3.14	12	June	15.6	76	33
10	O	Western Lt. & Tel.	34	1.80	5.3	2.51	32	June	13.5	64	27
22	O	Western Mass. Cos.	43	2.20	5.1	3.00	6	July	14.3	73	52
88	S	Wisc. El. Pr. (Cons.)	34	1.50	4.4	2.27	20	June	15.0	66	39
35	O	Wisconsin P. & L.	25	1.28	5.1	1.65	4	June	15.2	78	32
31	S	Wisconsin Pub. Serv.	23	1.10	4.8	1.62	11	July	14.2	68	34
		Averages			4.7%				15.6	73%	
		Foreign Companies									
186	S	American & Foreign Pr.	15	$ .75(e)	5.0%	$1.94	D19%	June	7.7	39%	48%
137	A	Brazilian Trac. L. & P.	8	—	—	1.26	D6	Dec.	6.3	—	70
59	A	British Columbia Pr.	33	1.20	3.6	1.62	16	Dec.	20.4	62	28
16	A	Gatineau Power	33	1.20	3.6	1.99	12	Dec.	16.6	60	30
10	A	Quebec Power	30	1.20	4.0	1.56	20	Dec.	19.2	77	44
45	A	Shawinigan Water & Pr.	66	1.45	2.2	2.84	25	Dec.	23.2	51	35

B—Boston Exchange. A—American Stock Exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. D—Decrease. *If additional common shares have been recently offered, earnings are adjusted to give effect to the offering. Percentage change is in the net income available for common stock. **Based on average number of shares. a—Also regular annual 3 per cent stock dividend, which is included in the yield. e—Includes 15 cents extra. g—Also 10 per cent stock dividend January 31, 1955. h—Also 5 per cent stock dividend. †—Estimated. #—Also occasional stock dividend.

What Others Think

Joint Utility-Union University Course

WHAT has been described as one of the first instances—if not the first—where representatives of both labor and management have cosponsored a joint study of problems affecting them both, has just been brought to a successful conclusion at Honolulu, Hawaii.

The union involved was Local 1260, IBEW (AFL), which has contracts with both the electric and telephone utilities in the islands. When, following negotiations late in 1954, representatives of Hawaiian Telephone Company proposed to the union the cosponsorship of such a study, the latter immediately agreed.

The subjects involved were those of job evaluation and systematic wage administration. During the negotiations the representatives of the company and the union were unable to agree on certain suggested wage changes. The disagreement was an honest one, and it became apparent that a joint instruction on the subject of job evaluation might remove the misunderstandings which existed.

In its dealings with the different utilities, Local 1260 had found four different job evaluation systems in effect, and it was difficult for the members to understand how the various wage rates had been arrived at. A committee was set up, but its training was handicapped through having to deal with four different methods.

It was believed that a joint study would make clearer the principles involved in job evaluation, and make possible a more uniform basis of procedure.

SELECTION of an instructor was highly important, and the sponsors, after careful consideration, selected Professor Robert D. Gray, director of the industrial relations section and professor of economics and industrial relations at the California Institute of Technology.

The West coast specialist visualized at once the sinificance of the proposed study, and agreed to undertake the task. While he conducted classes in which only union members had participated, as well as various courses for management personnel, he had never taught representatives of both at the same time. From information he received through the Industrial Relations Counselors Service at New York, it was the first time such a course had been conducted anywhere.

"It might seem at first unusual for both company and union representatives to study job evaluation and systematic wage administration together," he said. "Actually, the idea makes a great deal of sense. Just as a company must be able to explain to some employees why they get more or less than others, so a union covering a variety of jobs and skills must be

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prepared to explain to its members why some receive more or less pay."

The course as he outlined it, focused only on certain techniques of determining wages, which applied to both management and labor. "Both need to understand the same multiplication tables, the same alphabet, the same language," he said. "As designed, the course gives both groups the same knowledge of facts which both must consider in establishing wage rates."

From the outset, the program more than exceeded the expectations of the sponsors. The University of Hawaii agreed to co-operate by including it in the summer session schedule, and provided classroom facilities on the campus. Nine representatives of the union enrolled, including the business manager and financial secretary of Local 1260, as well as the president of Local 1414 located on one of the other islands.

THE telephone company invited the Hawaiian Electric Company to send students, since it, like the former utility, had relations with the same union. A subsidiary of the power company, its supply company, was also invited. A total of twenty-eight students enrolled, of whom eight were from the electric company, three from the subsidiary, seven from the telephone company, and one from the utility on a neighbor island, in addition to the nine union representatives.

Professor Gray arranged the twenty-eight in groups of four, each group seated around an individual table, with union and management representatives sitting at the same table. At the close of the first week, the students were shuffled to different tables, and the same procedure followed in the remaining weeks so that each student sat with four different groups during the four weeks.

As the class progressed and problems were presented, each group acted as a unit and held a caucus to decide its answer. A spokesman was chosen to give the response, a different one for each caucus. Thus all had an opportunity to be heard sooner or later. At times differences of opinion arose, and it was interesting to observe these were between tables, rather than between labor and management.

PROFESSOR Gray entered into the informal spirit of the class, donning an aloha shirt and wearing an alarm wrist watch which went off at the proper time to permit a coffee break at 10 A.M. and sounding the end of the session at noon.

At the initial session he described his objective:

> We are trying to look at the great variety of problems that are involved in setting a wage rate. First of all, it is necessary to look at the job description, to find out exactly what people are doing, because one of the assumptions is that people should be paid in accordance with what they are doing on a job.
>
> The next problem is to find a method of determining the relative value of jobs, whether two jobs are worth approximately the same, or whether one is worth more or less than the other.
>
> Then we must examine the wage structure, the kind of plan of wage rates to be set up. Questions like range in rates, a single rate, progression by merit increases, or progression by length of service.
>
> There is the problem of finding out what are the prevailing rates in the industry and the community. Finally, we must decide what is a fair and justifiable rate on a specific job.

Following the last day's session, students and instructor adjourned to the Princess Kaiulani hotel at Waikiki, where

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closing ceremonies were enacted. President Paul S. Bachman of the university presented the class members with certificates of graduation, and brief talks were made by J. Ballard Atherton, president of Hawaiian Telephone Company; Carl J. Schiffers, vice president of Hawaiian Electric Company; and Walters Eli, IBEW international representative.

"Lots of people in the community were amazed we got together on this course," Eli remarked.

MARIE HORIO, shop stewardess at Hawaiian Telephone Company, presented the instructor with a lei and Nora Fujikawa, a telephone force adjustment supervisor, surprised him with a beautiful koa salad bowl and individual serving bowls, a gift from the class.

To make the program complete, Mrs. Dorothy Glass, administrative assistant of Hawaiian Electric Company, read a job description which the class had drawn up humorously outlining the particulars and specifics of Gray's own job.

An indication of how successful it was can be found in the fact that numerous other Honolulu companies sought to enter students after it was announced. Already some discussion of repeating it or a similar course next summer has taken place.

—RALPH O. BECK, JR.,
Vice president, Hawaiian Telephone Company.

Alternatives to Public Utility Regulation by Commissions

IN a presentation recently delivered to the Public Utilities Association of the Virginias, H. Lester Hooker, chairman of the Virginia State Corporation Commission, finds many reasons to consider public utility regulation, as we have it today in the United States, a notable success. He reminds us that there are alternatives to the commission brand of regulation. He says:

> . . . We have, of course, public ownership, either in the form of direct operation by central government or by local government management, in the greater part of the world. This is known in England as the socialization or nationalization of utility services, although for some obscure reason of semantics the advocates of such a system in the United States prefer not to call it by such names in this county. . . .
>
> Are there any other alternatives? Yes, in some foreign countries, especially in Latin America, we have a sort of concession form of utility operation, representing investment from the United States, Belgium, Canada, etc. Investment in the utilities by foreign capital is permitted by sufferance of the sovereign government. Rates are fixed by a minister of the government on a discretionary basis which might be called fiat regulation. And if foreign owners become dissatisfied with their bargain they can sell out to the government at a price fixed by that government. In some cases, such as in Argentina, the government has acted first and expropriated the properties.

COMMISSION regulation, as practiced in the United States, and perhaps Canada, is quite unlike what exists in other areas, as Judge Hooker points out. And the fact that the United States has been able to retain utility industries as part of the free enterprise system, and the fact that other countries, for the most part,

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have not succeeded in doing this, certainly indicates a most persuasive degree of success for the so-called American brand of utility regulation.

Reasons for this success are many, in the view of Judge Hooker. But he adds:

> . . . the unique characteristic of commission regulation which we do not find in the alternative forms of utility operation or control. . . . is its elasticity. . . . the product of trial and error. It is something which apparently refuses to be bound by any formula but it always somehow eventually aligns itself with general standards of reasonableness.

Judge Hooker admits that there have been variations and deviations, political crises, scandals, and investigations, but insists that not one single state has ever abolished its regulatory agency or conceded that it had failed as an institution for controlling utility services in the public interest. This, the Virginia chairman maintains, is a pretty good record.

The Interstate Pipeline Company as Natural Gas Producer

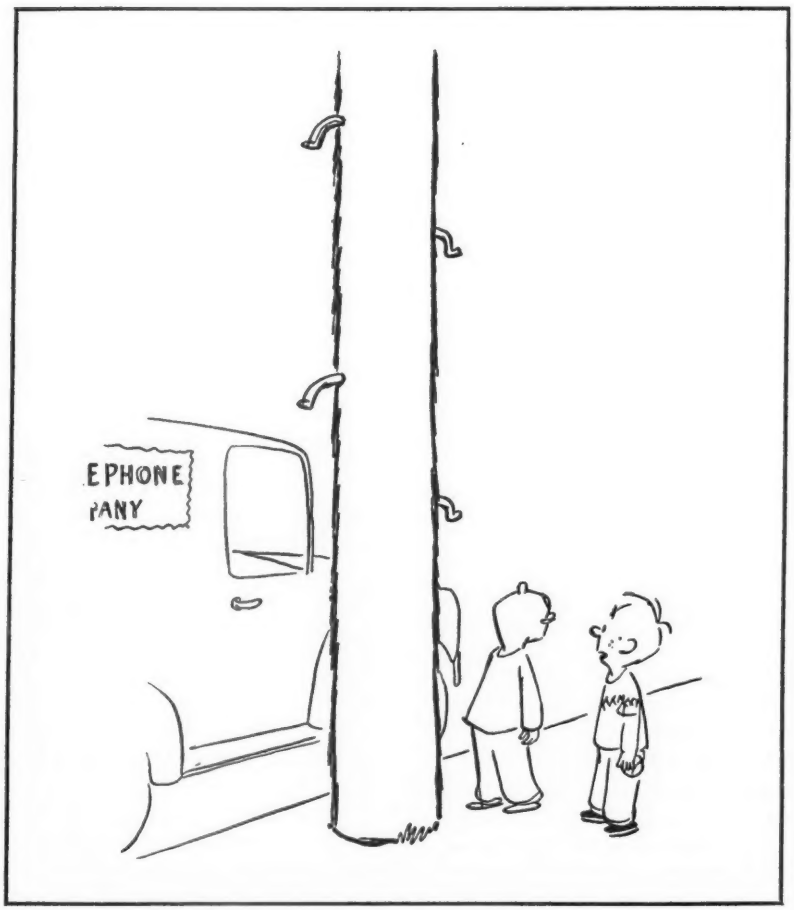
BEING uncertain, the regulatory status of the producer of natural gas, whether pipeline or independent, is still generating substantial interest, not only in the United States, but in Canada. It has not been so often stated, in recent months, but pipelines engaged in the production phase of the industry have been subject to much regulatory uncertainty. And as W. E. Mueller, president of the Colorado Interstate Gas Company, told his audience, including representatives of the Canadian gas industry, at a meeting of the Independent Natural Gas Association in Jasper Park, Canada, last month, the experience of the pipelines constitutes a valid and telling argument against federal regulation of the production phase, especially the so-called utility rate base method of regulation.

Mr. Mueller noted that prior to April 15, 1954, when the Federal Power Commission, in a rate proceeding affecting Panhandle Eastern Pipe Line Company, established a policy designed to encourage pipelines to explore for natural gas and to increase their own reserves, the commission had followed a rate base approach in pricing the gas produced by transmission companies from their own reserves. The effect of this early policy was to allow such companies to recover only their production costs, together with a utility rate of return on their investment in such reserves. It resulted in a valuation of owned production of transmission companies far below the reasonable or market value of the gas produced. In the experience of Colorado Interstate, which had reserves of this sort, the former policy of FPC was to value production from the reserves at about 2½ cents per Mcf, while independent producers in the same field were receiving 10 to 12 cents per Mcf.

The pipeline executive remarked:

> The inequity of such a policy is obvious. The practical result was to drive transmission companies from the production business or to prevent them from entering it in the first place. Colorado Interstate's proportion of owned reserves steadily decreased during the past eight years from 100 per cent to less than 50 per cent.

In its decision of April 15, 1954, the commission adopted a new policy permitting Panhandle Eastern to recover for its own production the weighted



"THOSE FELLAS MUST EAT PRETTY WELL"

average arm's-length price of gas at the wellhead in the fields where its gas was produced. . . . the commission's decision was a correct and farsighted one and a significant step forward in regulatory thinking. However, it has been appealed and decision is pending in the United States court of appeals for the District of Columbia.

IN Mr. Mueller's opinion, the effects of the rate base method in pricing pipeline production prior to the Panhandle Eastern decision clearly shows what happens to gas supply under that method of regulation. It discouraged the acquisition of reserves by both established and newly organized transmission companies. The older companies were actually encouraged to get out of the production business and newer companies were prevented from entering it. What Mr. Mueller sees as a shortsighted policy resulted in a marked decrease in pipeline-owned supply,

amounting today to only a small portion of our country's total reserves.

The basic mistake, said the pipeline official, was the application of the rate base method to production properties. While this method may be generally conceded to be proper when applied to transmission facilities, the Federal Power Commission does not now seek to apply it to gas production properties, because it may feel that it cannot at the same time maintain supply. The problem lies in the source of natural gas, according to the speaker. It is a depletable resource, which is becoming more difficult and expensive to find in the face of an ever-increasing demand.

MR. MUELLER believes that people who take an honest look at what has happened to pipeline-owned supply under past regulation will find it crystal clear that the same type of regulation should not be applied to the independent producer. And, as he pointed out, the Harris Bill, passed by the House in the last session of Congress and reported favorably by the Senate Interstate Commerce Committee, would in fact remove the independent producer from utility-type regulation by FPC. In its broader application, it also confirms the reasoning that the pipeline official feels was central to the Panhandle Eastern decision, providing that transmission companies should receive a reasonable market price for their own production. If the Harris Bill fails to pass, Mr. Mueller feels, just as certainly as pipeline-owned supply has diminished, so will the present really important supply now owned by independent producers diminish year by year, especially if the rate base method of regulation is applied to it. The speaker added:

> Even under conditions in which the independent producer has been free from regulation, over-all gas reserves in the United States, in terms of years of supply, have decreased. In other words, producers unhampered by regulation have not been able to find new reserves fast enough to keep pace with consumption.
>
> In spite of this record, we still have with us vigorous proponents of the rate base method of regulation of gas production. They would even extend it to independent producers. I believe the consequences of following their ideas would be serious indeed, to distributors and consumers as well as transmission companies.

As supply decreases, Mr. Mueller stated, price will increase irrespective of the type of regulation or pricing policy then in vogue. Prices will stabilize or become lower to the extent that supply becomes equal to or overtakes demand. It was the speaker's belief that the situation on gas supply and price "is basically that simple." As he went on to say,

> A fair and proper application of the principles of the Panhandle Eastern decision and of the Harris Bill, if it is enacted, is essential if their objectives are to be obtained. Otherwise, there could be a partial or almost complete dissipation of these principles in actual application. For example, the thought may be advanced that pipeline companies having their own supply should consider the acceptance of a lower rate of return on their transmission facilities than would otherwise be applicable to them. Also, that if they receive a fair field price for their own gas, they should not receive the related federal income tax benefits. Any such treatment will nullify the principles adopted by the Federal Power Commission in its Panhandle Eastern decision.

The speaker insisted that if transmis-

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sion companies are to be encouraged to explore for and acquire their own gas reserves, they must have the benefit of tax deductions related to the production function; namely, intangible drilling costs and percentage depletion. In this view, the allowance of field price and the tax benefits go hand in hand. Field price, without proper tax allocations, Mr. Mueller stated, will not provide the economic incentive for exploration and development of additional gas reserves. Further, income tax deductions must be assigned to the functions to which the charges or benefits relate. As pointed out, deductions for intangible drilling and percentage depletion have nothing to do with transmission cost of service. They relate to production only, and, in the speaker's opinion, should be so assigned. His conclusion was that if pipeline companies are to be encouraged to maintain and improve their owned supply, they must receive the same treatment as the independent producer.

The "Federal Power or None" Policy

THE problem of increasing the power supply of the Pacific Northwest cannot logically be said to be a controversy between public and private power. As Under Secretary of the Interior Clarence A. Davis told a group of Lane county Republican women in Eugene, Oregon, last month, the municipal power operation owned and controlled by the people of that city is just as "public" as is the Bonneville Power Administration or the Tennessee Valley Authority. The difference, he said, is that it is controlled by the people who use its output, who provide the money for its expansion, and who are the beneficiaries of its operations.

Then Mr. Davis restated the issue:

> The constant endeavor of the federalizers and the socializers to paint this power problem as a contest between a beneficent federal government on the one side and a wicked monster which they call the power trust on the other is so much political hogwash. The issue is between those who insist on federal power or none on the one side and those who believe in a combination of federal, state, and local power on the other . . . . the real problem is to see that the power needs are met.

The speaker felt that in the interests of accuracy, it is worth while to trace the historical development of federal power operations. Since providing electricity is not a Constitution-delegated power, it has grown up, mainly as a by-product, out of other programs for the development of natural resources, the reclamation of land, the exercise of the power of Congress over navigation, and construction for the national defense. In fact, as Mr. Davis took pains to point out, the program of reclamation and water development has its roots deep in the Republican party. It was President Theodore Roosevelt who sponsored, and a Republican Congress which passed, the Reclamation Act of 1902. Under a Republican program and leadership, the first federal power law was enacted in 1906. This authorized the Secretary of Interior, when it appeared to be advantageous to do so, to provide for the installation of hydroelectric works in reclamation dams, either to lease the water-power privileges to private individuals, states, or municipalities for development, or to develop them as federal projects, and if they were developed as federal projects, to sell the electrical output of such dams, "giving preference to municipalities and

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public bodies," and to use the proceeds to help pay for the project. In the view of Mr. Davis, the purpose of such a law was obvious. It merely attempted to pass back as far as possible to the taxpayers a preferential right to the power produced by the project which taxes made possible.

THAT law remained intact upon the federal statutes from 1906 until 1937 as the federal power policy, the Interior Department official declared, and it was not until 1937, at the height of the New Deal, that a different policy was adopted in the Bonneville Act to provide, not for the preferential sale of power to tax-collecting agencies, such as municipalities, to help ease the tax burden, but was amended to provide that the power should be sold preferentially to nonprofit marketing agencies. It is the speaker's belief that this policy was responsible for the exclusion from the federal power market, except at the bottom of the totem pole, those persons in large areas of the country which choose to be served their electricity by means other than a government or nonprofit agency. Mr. Davis continued:

> What happened in the intervening years between 1906 and 1953? What was our national power policy during that time? Was it a policy of having the federal government build all the dams on all the streams and install all the electric facilities? You may be surprised to know that during that period of time the federal government was not building all the power plants. In many cases it was operating on a partnership basis with states, municipalities, and private corporations, to the extent that during that time there were 27 partnership projects constructed in 13 states, where the federal government built the dam and leased the power privileges to municipalities, to private corporations, to industrial concerns, and to all kinds of people who stood ready and willing to put up the money to build the electrical aspects of the project.
>
> . . . of these 27 projects 12 of them were built during Republican administrations, 15 of them were built under Democrat administrations.

The speaker went on to show that six of the projects were built during the New Deal and three during the Fair Deal administrations. He suggested that the partnership policy contrary to the belief of most is actually a historic policy of Democratic administrations, though today Democrats are apt to call it a betrayal of the national interest, a giveaway, or similar other terms.

WITH this by way of background, Mr. Davis was prepared to look at the power problem of the Pacific Northwest, where according to the best figures available some 4,000,000 additional kilowatts of electric energy will be needed by 1961 and perhaps 6,000,000 in the next ten years. The question is, the speaker insisted, to get those kilowatts most quickly and at the lowest possible costs and with the greatest benefits to the people of the area.

As Mr. Davis compared the positions taken by the two political parties today on this issue:

> Our position is that the needs of this rapidly growing area are tremendous; that it will require the best efforts of all of us, federal, state, and local, to meet those needs; that the problem is to furnish a power supply and we ought not cast a wet blanket on any reasonable method of augmenting that power supply; that the federal government should continue to participate in that program;

that the need is so great and time so pressing that we should utilize all of the resources of all of us to be sure we meet that need.

On the other hand, the views of the federalizers on the issue are quite clear. They believe that the federal government should have an exclusive monopoly of hydroelectric power in this region, that it should build all these dams and that for any one else to be let do so is a giveaway; second, that the federal goverment has an obligation to supply the electric power for this region (where it got that obligation is not made clear); and third, that the federal government can meet the situation bigger, better, quicker, and cheaper than anyone else.

Our position, then, is that of the maximum development of the resources

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of the Northwest; that ours is the method which will utilize all of the potentialities of all of us. Theirs is the method of a narrow restriction to a single source —the federal government—and failing in that, a power shortage in the Northwest.

THOSE who have advocated a program of all-federal construction, Mr. Davis declared, have not succeeded in coming home from Washington with the money, though they have, in the last ten years, received approximately 40 per cent of all the money appropriated for hydroelectric development.

According to statistics compiled by a joint committee representing the public power agencies of the Pacific Northwest states, the cities of Seattle and Tacoma, and the private utilities of the region, it is agreed that approximately $3 billion in the next ten years will be needed to provide an adequate power supply for the region. This amounts to an average of $300,000,000 a year.

There is a decided contrast between this amount and actual appropriations. The Interior official remarked that the last Congress appropriated the required amounts to keep work in progress toward completion of Chief Joseph, McNary, and The Dalles. But as to new proposals, Congress was much less ready to spend large sums. Only appropriations for new projects were $500,000 for planning of the Cougar project; $310,000 for the Hills Creek planning; $100,000 for planning of the Green Peter project; $500,000 for further planning of the John Day project; and $1,000,000 for further planning and construction of Ice Harbor. Though these figures sound like a lot of money, the speaker admitted, they actually amount to a little more than $2,000,000 as compared with the $300,000,000 estimated to be the annual requirement of the region.

The speaker looked to the over-all budgets of the Bureau of Reclamation and Army Corps of Engineers to complete the picture. In 1950, the appropriations of the Reclamation Bureau for power features in the Columbia basin constituted 29 per cent of the bureau-wide appropriations. In 1951, they constituted 29 per cent. In 1952, 25 per cent; 1953, 25 per cent; 1954, 34 per cent; 1955, 24 per cent; and in 1956 only 21 per cent. The proportion of Army Engineers' funds allocated to the Columbia basin has likewise diminished from 40 per cent in 1954 to 17 per cent in 1956. To this administration spokesman, these diminishing percentages go far to discredit the claims of those who hope to have the federal government build all of the power facilities in the Columbia basin. At the present rate of appropriation it would take the federal government one hundred years to provide for the expected growth of power needs in the next six months.

ON the other hand, Mr. Davis declared, "There is now ready and waiting by local public agencies and private companies in the Northwest under our program of co-operation an adequate power supply for this region which these local people are willing to start building immediately if they are not blockaded and stopped by opposition of local political interests."

As examples of local enterprise and initiative, the following planned projects were mentioned:

1. Development of the Cougar project, providing $11,000,000 of nonfederal money and 25,000 kilowatts of electric capacity.

2. Company financing of the federal construction of the John Day project power features—$275,000,000 of nonfederal money.

3. Construction of the Green Peter

project power facilities by local financing.

4. City of Tacoma has requested an FPC license to construct projects on the Cowlitz with installed capacities of 300,000 kilowatts.

5. City of Seattle has received an FPC permit to investigate construction of a project on the Pend Oreille, planned capacity of 265,000 kilowatts.

6. Puget Sound Power & Light Company has received FPC permits to investigate a project possibility on the Upper Baker for 85,000 kilowatts.

7. Chelan County Public Utility District has received preliminary FPC permits for the Rocky Reach project which would provide 585,000 kilowatts, and Grant County Public Utility District has received permits to proceed with the construction of Priest Rapids, having a capacity of 1,500,000 kilowatts.

Such examples of local initiative, the speaker maintained, show that the region, if unobstructed by those who want federal power or none, can carry its own responsibility and manage its own affairs.

Notes on Recent Publications

YEARS of man-hours and millions of dollars are currently being invested in electronic data-processing systems by pioneer firms. These and other companies are assembling answers to questions about management experience with electronic data processing.

This new American Management Association publication is a comprehensive report to management on the latest developments in "the office revolution." This timely volume describes graphically how automatic data processing offers unparalleled speed, accuracy, controls, and savings for industry. It gives specific, practical information on: how to determine whether a company should adopt electronic data processing; how to plan the installation of an electronic data-processing system; what automatic data-processing equipment is available; how progressive companies are now using electronic data processing in such specific fields as customer and general accounting, production planning and labor budgeting, materials handling, etc.

Also included are reports of company experience with small, medium, and large computers, a summary of the evolution of data processing and its effect on company organization, a forecast of future developments in electronics, and glossary of programming terms.

ELECTRONIC DATA PROCESSING IN INDUSTRY: A Case Book of Management Experience. Published by the American Management Association, 330 West 42nd street, New York 36, New York. 256 pages. Price $7.75 (AMA members, $5.75).

DURING mid-August, Secretary of the Interior McKay announced that a synthesis gas with a high heating value, and with most of the characteristics of natural gas, had been produced on a laboratory scale. This synthesis gas is a mixture of carbon monoxide and hydrogen which has had its Btu content increased by passing the gas over a nickel-alloy catalyst.

A brief announcement of this appearing elsewhere in the press has created a stir in gas industry circles. The too-brief description provided little in the way of definite information leading to the proper source for additional reference. The source is a Bureau of Mines Report of Investigations (5137), entitled "The Synthesis of Methane" by Greyson, Demeter, Schlesinger, Johnson, Jonakin, and Myers. It was published in July, 1955, by the Department of Interior and released early in August. Copies of the report, a 50-page, paper-bound folio, are available from the Department of Interior, Washington 25, D. C.

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The March of Events

Utility Group Meets

DON B. POTTER, administrative vice president, Monongahela Power Company, Fairmont, West Virginia, was elected president of the Public Utilities Association of the Virginias at the group's thirty-seventh annual meeting at White Sulphur Springs, West Virginia, last month. He succeeded A. J. Bowen, division manager, Northern Virginia Power Company, as head of the regional organization of electric and gas companies in Virginia and West Virginia.

Other officers elected by the association include William J. Stewart, assistant general manager, Wheeling Electric Company, Wheeling, West Virginia, who succeeded Potter as first vice president. John C. Parrott, president, Roanoke Gas Company, Roanoke, Virginia, was elected second vice president. W. J. Keehne and J. D. Murray, both of Appalachian Electric Power Company, Roanoke, Virginia, were elected treasurer and assistant treasurer. Robert W. McKinnon, of Roanoke, Virginia, was re-elected executive secretary.

Over 400 delegates attending the gathering heard H. Lester Hooker, chairman of the Virginia State Corporation Commission, Richmond, describe the American system of commission regulation of privately owned utility companies as the "bulwark between private enterprise and socialization of all utilities!" In a discussion of current trends in utility regulation, he pointed out that the "American plan" of governmental regulation of privately operated utilities has produced a far greater volume of utility services at lower cost than any of the nationalized systems in other parts of the world. He urged that U. S. regulatory agencies be kept flexible in order to deal with changing problems in utility operation. (See, also, page 741.)

Paul D. Brooks, vice president in charge of sales, American Gas & Electric Service Corporation, New York, told the conference that the business outlook for utilities has never been so good as it is today, providing they take advantage of their sales opportunities. He cited the low market saturations of numerous electric appliances such as ranges, hot water heaters, clothes dryers, and others as the key to future load growth for the electric companies. The electric heat pump holds the greatest promise for building load in the near future, he said.

Francis X. Welch, editor, PUBLIC UTILITIES FORTNIGHTLY, Washington, speaking on the public relations aspects of utility regulation, said that the American public needs to be taught that the consumers' interest is very adequately protected by our system of regulation of public utili-

ties. He pointed out that the public is largely unaware that utility services and charges are regulated and that, in fact, they represent today's biggest bargain in the family budget. He said that it is the utility industry's responsibility to undertake the necessary educational job because the regulatory commissions themselves cannot do it. An intensive program to explain the function of utility regulation to the people might go a long way in solving the industry's problems in combating the propaganda of public power advocates, he pointed out.

Charles R. Sligh, chairman of the executive committee of the National Association of Manufacturers, Grand Rapids, Michigan, presented the NAM plan for reducing discriminatory income taxes on both corporate and individual incomes to a maximum of 35 per cent without loss of revenue to the federal government. He said the job could be accomplished in five years by intermediate steps and that the rising national productivity would offset the loss of taxes for the government.

Dixon-Yates Contract Settlement Delayed

THE Atomic Energy Commission was recently reported to be holding up settlement of cancellation charges on the Dixon-Yates contract because "there may be a question" as to whether or not the contract was valid in the first place.

This was disclosed by AEC Chairman Lewis Strauss in a letter to Senator Anderson (Democrat, New Mexico), chairman of the Joint Congressional Committee on Atomic Energy. Mr. Anderson said language of the Strauss letter meant to him that the AEC has "acknowledged some doubt exists as to the government's obligation to pay Dixon-Yates anything under the controversial contract."

The Senator said earlier this year the AEC did not have a contract with Dixon-Yates "because of the way it was entered into." He said the government should refuse to pay any cancellation costs, thus forcing the issue into court where the contract could be properly tested.

Power Policy Hearings Held

HOUSE investigators recently called Interior Department officials for a hearing on the administration's power policies.

Assistant Interior Secretary Fred G. Aandahl, Bonneville Power Administrator William A. Pearl, Southeastern Power Administrator Charles W. Leavy, Southwestern Power Administrator Douglas G. Wright, and H. T. Nelson, Reclamation Bureau regional director for Idaho were scheduled to appear.

Chairman Earl Chudoff (Democrat, Pennsylvania) has charged that the administration, in the sale of federal power, is favoring private utilities at the expense of co-operatives, municipalities, and other customers which by law are supposed to have preference.

The department officials were called to answer complaints from co-operatives and other preference customers, who told the subcommittee of their troubles at hearings in Springfield, Missouri; Atlanta; Denver; Idaho Falls, Idaho; and San Francisco.

One of the principal issues raised by the subcommittee involved the government's adoption without change of 11 out of 13 revisions in regulations proposed by Herman C. Kruse, Washington representative of the Pacific Gas and Electric Company.

ATA Officers Elected

ROSWELL F. THOMA, president of the Niagara Frontier Transit System, Inc., recently was elected president of the

American Transit Association. He succeeded Donald C. Hyde, general manager of the Cleveland Transit System.

Paul O. Dittmar, president of the South Suburban Safe Way Lines, Inc., of Harvey, Illinois, was elected vice president. John E. McCarthy, president of the New York City Omnibus Corporation, was re-elected treasurer.

Some 1,200 delegates attended the seventy-fourth session of the ATA held in Boston, Massachusetts, late last month.

Connecticut

Movers Put under Commission Regulations

A NEW law, requiring household goods movers operating within a city or town to be subject to the state public utilities commission regulations, went into effect recently. About 300 intracity household goods movers were affected. Previously, intracity movers were not subject to commission regulations.

Now they will have to obtain a commission certificate granting them permission to operate within their specified area. Rates and charges of the movers will be subject to commission regulation.

The "between-city" household goods movers, numbering about 215, have been under commission regulations for some time. The intercity movers will continue to conduct their operations within specified areas, called "zones."

Florida

Local Utility Levy Adopted

AN ordinance providing for the reimposition next January 1st of a 10 per cent municipal tax on utilities, including electric, gas, and telephone service, was adopted last month by the city council of Jacksonville.

Under the measure, a levy of 10 per cent will be charged to consumers of electricity and gas or users of telephone services with monthly bills of $500 or less. A 5 per cent charge will be applied against the next $1,000 of utility purchases, and 1 per cent on all purchases in excess of $2,000. The seller of the utility services will be required to collect the tax and remit to the city by the fifteenth of each month.

Revenue from the tax will go into a special fund, dedicated "solely and exclusively" to such capital improvements as constructing and extending streets, sanitary sewers, storm sewers, and others "as shall be set forth in the annual budget of the city." The tax funds also may be used for the retirement of bonds issued for such projects.

A similar tax had been in effect in Jacksonville for some three years before it was repealed in March, 1951. It produced about $1,400,000 in annual revenue.

Illinois

Transit Modernization Program Announced

A NEW 5-year modernization program calling for the purchase of 410 modern elevated-subway cars and 400 motorbuses at a cost of approximately $29,000,000 was announced this month by the Chicago Transit Authority.

The expenditure would be in addition to $95,000,000 spent on modernization of Chicago's local transportation system since the CTA was created in 1945 to take over the former private properties.

Virgil E. Gunlock, CTA chairman, said the 410 new elevated-subway cars would bring about complete modernization of equipment on the rapid transit system. Most of the 400 new buses would be acquired in the normal program of replacing old equipment as it wears out.

Gunlock said some of the new buses may replace streetcars now operating on three routes. These three routes represent the only vestige of a vast streetcar system which less than ten years ago carried most of the city's transit riders.

Missouri

Transit Strike Ended

AFL bus and streetcar operators on October 14th gave up their 4-day strike against the Public Service Company and voted to return to work immediately.

The decision was announced by union leaders after a 2-hour closed meeting of the membership.

Governor Phil M. Donnelly had ordered state seizure of the St. Louis Public Service Company to terminate a strike called by American Federation of Labor operators on October 10th.

The governor acted under provisions of the King-Thompson Act, which permits state seizure of utilities when a strike imperils the "public interest, health, and welfare." In a telegram to the company and the union, Donnelly directed Daniel C. Rogers, chairman of the state mediation board, to administer the seizure authority. He also directed all officers and members of the union, the Amalgamated Association of Street, Electric Railway, and Motor Coach Employees, Local 788, to comply with the seizure by resuming normal operation of transportation service.

The streetcar and bus operators, however, voted to remain on strike. The governor immediately sent State Attorney General John M. Dalton and three aides to St. Louis "to take the legal action necessary for the protection of the public interest." The state attorney general filed a damage suit demanding $10,000-a-day penalties against the union.

Nebraska

Rurals Consider Power Plant

THE possibility of an electrical generating plant being built by rural power districts in southeastern Nebraska recently entered the state's power picture. Lester Trussell of Beatrice, manager of the Norris Rural Public Power District serving Gage, Lancaster, Saline, Jefferson, and Thayer counties, said the advisability of such a move was being studied.

He reported that this might be done jointly by several rural districts in southeastern Nebraska. Another possibility, he said, is that southeastern districts might join with a group of rurals in northeastern Nebraska which have plans under way for a plant there.

Power leaders of the state have agreed that the southeastern section should have a source of power within the area.

Plans for a plant to be built by the Nebraska Public Power System near Beatrice were abandoned when the NPPS was unable to get satisfactory financing. An atomic energy plant proposed by Consumers Public Power District reportedly is

slated for the Lincoln-Beatrice area but it has not been approved by the Atomic Energy Commission.

Trussell said studies were being made to see if further investigation of the southeastern rural plant was justified. If the idea is found to be feasible, he said, engineers would be hired to make further studies.

Citing the deadlock in the state's power controversy, Trussell commented that it had reached the point "that the rurals will have to do something to assure themselves a supply of power."

Texas

Private Motoring Cost Cited

It cost eighteen Dallas motorists 129.1 per cent more to drive an automobile to and from work in the downtown area than to use Dallas Transit Company facilities, according to a recent report.

The report covered oil, gas, and parking expenditures of the eighteen motorists who participated for thirty days in the transit company's "operation audit."

The eighteen motorists spent a total of $523.77 for gas, oil, and parking during the 30-day period. Transit bus or trolley expenditures during the period would have totaled $228.60. During the 30-day test, the motorists kept day-to-day records on gas, oil, and parking expenses involved in driving to and from their residences in widely scattered areas of the city.

Electric Rates Cut

Beginning with November billing, consumers of electrical power in Texas City will pay from 15 to 30 per cent less, due to adoption by the city council of a new rate ordinance.

The new rate cuts the home owner's cost 25 cents on consumption of up to 125 kilowatts monthly and as much as $2.25 per month for consumption of 500 or more kilowatts.

The council rejected a request by the utility that the rate be raised only on notice from the company to the city. Any increases, Community Public Service Company said, would have to stem from higher fuel costs to the company. Instead, the council adopted a resolution whereby public hearings would have to be held to permit any further changes in rates.

Tennessee Gas Wins Refund

The Tennessee Gas Transmission Company recently won a district court award of $1,140,906 for recovery of taxes paid under Texas' invalidated natural gas "gathering" tax. District Judge Jack Roberts held that the company paid the tax involuntarily, even though it did not make formal protest. Other companies paid a total of more than $6,000,000 in a like manner.

The state legislature gave them permission to sue the state for recovery of the taxes when the U. S. Supreme Court held in 1953 the Texas "gathering" tax was an unconstitutional burden on interstate commerce.

Attorney General John Ben Shepperd was said to be planning to appeal Judge Roberts' decision in the Tennessee Gas Case. If the trial court decision stands, however, the legislature will be asked to repay the company. The money paid under the gathering taxes already has been spent by the state.

Gas companies paid nearly $30,000,000 of taxes under protests and recovered it after the Supreme Court decision. The $6,000,000 represented taxes paid without protests.

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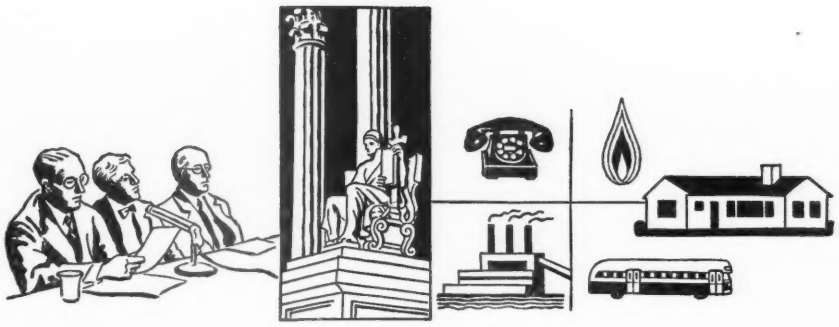

Progress of Regulation

Regulatory Trends

A PUBLIC utility company is entitled to an allowance, as a deduction from revenues, for taxes paid in various communities. Ordinarily, no attempt is made to analyze the general tax situation in each community. Impositions by a municipality may, however, call for special treatment in order to prevent the imposition of an unfair burden on other communities in the system. The Missouri commission, in a recent rate proceeding, explained the situation in this way: Assuming a company has exchanges in Cities A and B and City A levies a license tax amounting to $2,500 whereas City B levies no tax, should telephone users in City B pay rates based on operating expenses including or excluding this amount? The rate of return will be the same in either case, the only difference being which telephone users bear this expense. Stockholders have no financial interest since rates must be sufficient to cover all expenses, including taxes. *Re Western Light & Teleph. Co. Case No. 12,976, August 2, 1955.*

Special Municipal Levies to Be Borne Locally

The Western Light & Telephone Company had applied for a telephone rate increase and for authority to pass on special taxes to subscribers in the cities and towns where levied. Twenty-five cities and towns were imposing such taxes in amounts ranging from a flat rate up to 5 per cent of the gross revenues of the exchange. Such a tax is altogether different from general taxes assessed against all of the property owned by a utility, or income taxes assessed against a company's income from all operations. A license tax is assessed wholly as a revenue-producing measure for a particular city or town, and the company's system-wide operations are not benefited. For that reason, the commission decided, it should not be included as an operating expense to be borne by parties

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receiving no benefit from it, but should be assessed against patrons in cities imposing the tax.

The commission referred to a state supreme court decision (93 PUR NS 454) overruling a commission order based on the conclusion that it was unjust discrimination for water consumers of one area to be burdened with any part of special taxes levied or payments exacted by another area. The court had declared that all taxes, including taxes on gross receipts, are part of operating expenses and no doubt are, and might be, taken into consideration by the company and the commission when it becomes necessary to fix rates. The commission, however, was of the opinion that the present case was clearly distinguishable on the facts.

The court had raised the question whether imposition of the taxes by the cities resulted as a matter of fact in rate discrimination, and it also raised the question whether the company's proposals and the commission's order fairly adjusted or eliminated the inequality. The commission said that in the present case the answer was that it found the taxes resulted in discrimination and that there was undue discrimination when there was a large tax assessed by one city and a small tax or no tax assessed by another city. The answer to the second question was that the commission found that permission to pass these license taxes to subscribers of the exchange in the city or town imposing the tax fairly adjusted or eliminated the inequality. Dissenting commissioners, however, said that the majority decision was in conflict with the opinion of the supreme court, although in that case a general rate increase was not involved, while the contrary was true in the present case.

Recent Increase in Special Tax Distinguished

In another case before the same commission, however, a different conclusion was reached. The Kansas City Power & Light Company requested the commission to increase electric rates within the boundaries of Kansas City because of an additional license tax recently levied by the city. The company wanted to pass on the additional tax to patrons residing in that city. The commission referred to the Western Light & Telephone Company decision and then proceeded to distinguish the two cases. In a previous rate case, Kansas City Power & Light Company had submitted a claim for operating expenses which included gross receipts taxes. No objection by any interested party had been made to the effect that their inclusion created undue discrimination. Only one-half per cent constituted the difference between the tax imposed by Kansas City and that imposed by other cities and towns. The commission conceded that the levy of the additional tax would result in less return to the company than was contemplated, since the company would be required to pay the tax until it had authority to include the same in its rates.

The general rule was formulated that all gross receipts taxes paid by a public utility should be handled in the same manner; *i.e.*, by including them in operating expenses when they do not result in undue discrimination, or by passing them on to customers in the city levying such taxes when they do result in

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undue discrimination. The commission concluded that since the company had previously seen fit to include the license tax as part of operating expense, which was being paid by all customers in the system, it would be unwise to require some of them to pay another portion of such tax by allowing it to be passed on directly. *Re Kansas City Power & Light Co. Case No. 13,094, August 31, 1955.*

Special Tax Problems Faced in Other States

The Utah commission has taken the position that it is unfair and unjust to spread the burden of special license fees or taxes upon consumers residing outside the limits of municipalities imposing them. The commission found no reason why a special license fee or tax imposed by Salt Lake City upon Mountain Fuel Supply Company should be borne in part by consumers of gas residing outside the corporate limits (94 PUR NS 88). It seemed unfair for residents of South Salt Lake, for example, where the license fee was one per cent, to pay any portion of the two per cent fee exacted by Salt Lake City. The commission said it would be even more inequitable for gas consumers residing in municipalities which did not impose any license fees or taxes to pay any portion of such special taxes.

The same view was expressed in rate cases involving the Mountain States Telephone & Telegraph Company (94 PUR NS 105) and the Utah Power & Light Company (95 PUR NS 390). The Utah supreme court upheld the commission's action in allowing Mountain States Telephone & Telegraph Company to charge and bill subscribers of particular areas for excise, sales, franchise, or occupation taxes, costs of services rendered to local political subdivisions by agreement, or other local impositions, where such impositions were exacted by local governing bodies (2 PUR3d 521). The court could see no distinction between cases where franchises are involved and cases where other levies are imposed, which distinction had been made by the Washington court (mentioned below). The fact that Salt Lake City had upped its exaction by 100 per cent, considering population disparity, pointed "with almost mathematical certainty" to the conclusion that under the former system, without the commission's order, in any rate schedule adjusted with such increase, citizens of the city of Ogden would have a higher phone bill by paying their pro rata percentage of local levies as statewide subscribers.

Similar views were expressed by the commissions in California (PUR1922A 277), Idaho (PUR1920C 949), Michigan (14 PUR NS 36), and North Carolina (7 PUR NS 21). After the Illinois commission had authorized a general rate increase except in certain municipalities where the Western United Gas & Electric Company was required to make annual payments under franchise ordinances, the city of Elmhurst appealed to the Illinois supreme court, but the court held that it would be unjust to spread the burden of this annual payment over the whole northern division (13 PUR NS 441). It was to be borne by consumers residing within the city, as that city alone received the advantage of the payment.

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The Washington commission, in considering an application by the Pacific Telephone & Telegraph Company for authority to pass on to subscribers special taxes levied within seven cities, said it would be manifestly unfair to impose upon the many thousands of telephone subscribers in the state who lived elsewhere the burden of providing the dollars necessary to pay those taxes (37 PUR NS 321). It was no answer to say that the company should itself pay the tax, for the company must necessarily pay it out of dollars received from subscribers. The Washington supreme court, however, distinguished between payments made under franchises negotiated between the utility and the municipality involved and payments exacted by a municipality under license, occupation, use of street, or similar taxes (52 PUR NS 6). It held that with respect to the former, such payments should be charged to general operating expenses and included within the statewide rates, but that the latter should be passed on to customers within the municipality exacting them.

Evils of Spreading Special Taxes

The Utah commission, in the Mountain Fuel Supply Company Case (above), said that if consumers of gas over the entire system were required to bear the burden resulting from special taxes or fees imposed by one city, then each other city served by the company would be encouraged, if not indeed forced, to impose a similar tax or fee upon the company in order to equalize the benefits and burdens for the consumers of gas within its corporate limits. Each time a city increased its exaction from the utility, each other city on the company's system would be justified in making a similar increase. This, the commission thought, would not be in the public interest.

Kansas City, Missouri, eight days after the issuance of the commission order increasing electric rates for Kansas City Power & Light Company (reviewed above), did that very thing. It adopted an ordinance increasing the amount of the license tax from 5½ per cent to 6 per cent of gross receipts derived from sales of electricity within the city limits.

Review of Current Cases

Natural Gas Producer Enjoined from Abandoning Sales to Interstate Gas Company

THE Federal Power Commission has obtained an injunction from the United States district court to restrain a Texas natural gas producer from discontinuing sales of gas to an interstate purchaser pending final determination by the commission on the issue of whether abandonment should be permitted.

The producer, a corporation, has been delivering gas directly from its gathering pipes to the purchaser's pipeline through which the gas is conveyed out of the state for resale. Relying on an escape clause in its contract with the pipeline company but without obtaining the commission's approval, the producer threatened to aban-

don further sales of natural gas.

Commission Jurisdiction

The producer contended before the court that the commission had no power to approve or disapprove the abandonment of sales of gas to this purchaser for the reasons that the producer did not operate interstate and was not certificated under federal authority. The court thought, however, that its operations constituted "the sale in interstate commerce of natural gas for resale," within the meaning of § 1(b) of the Natural Gas Act, and that it was therefore subject to the jurisdiction of the commission.

The fact that the producer does not have a federal certificate, the court said, does not affect the commission's jurisdiction. It merely suggests that the producer has failed to observe its duty to obtain a certificate as required by the act.

The producer insisted that the gas it sold did not enter into interstate transportation until it was put under pressure in the purchaser's pipeline. But the court rejected this proposition, asserting that the point where the interstate journey begins is not dependent upon the particular place where the gas is put under the compression necessary to move it interstate. The application of pressure is only one incident in the interstate transportation rather than its origin.

Commission Approval Requisite

Since, as the court found, sales in interstate commerce were made by the producer, both its operations and the facilities with which the operations were conducted thereby became subject to the jurisdiction of the commission under the Natural Gas Act. This fact, together with the provision of the act which prohibits a gas company from abandoning without commission approval any service rendered by means of facilities subject to its jurisdiction, impelled the court to the conclusion that such approval is requisite to lawful abandonment of the service. *Federal Power Commission v. Huber (J. M.) Corp. No. 244-55, August 16, 1955.*

Expense of Supplying Needs of Whole System Must Be Considered

A MAINE water company which also served consumers in New Hampshire appealed to the New Hampshire supreme court after the commission had denied an application for a rate increase. The company took the position that the commission's failure to consider the expense of adequately supplying the needs of the whole system as a unit was error.

The commission had reached its decision after concluding that a new water source the company had developed in Maine was not required in order adequately to supply the New Hampshire consumers.

The unit normally considered for ratemaking purposes, commented the court, even when a utility does business in two or more states and is subject to regulation in each, is the entire interconnected operating property of the utility without regard to particular groups of consumers or geographical subdivisions. No conditions existed in this case which would require or permit the consideration of a smaller unit.

Rates imposed upon like consumers within a single system, said the court, are required to be just and reasonable *inter se,* as well as *in toto.* No distinction as to rates should be permitted between con-

sumers of the same class on the basis of their proximity to or distance from the source of supply. Such a distinction would result in an unreasonable preference or disadvantage.

The only difference between the Maine and New Hampshire consumers in this case was that the latter were adequately supplied from the old source because of the fortuitous circumstance that they were located nearest to it. Such a difference was not sufficient justification for the establishment of rates without consideration of the reasonable expenses required for those additions or improvements to the system as a whole which are required to provide adequate service to all consumers of the same class. Where water furnished is all secured from the same sources and is supplied to several contiguous communities embraced in one general district, with no unreasonable extensions to serve lean territory or other elements creating material difference in cost, a uniform rate for the entire territory is indicated and justified.

The court pointed out that, in so far as the new source was needed to provide fire protection to the Maine residents, the New Hampshire consumers were not to be charged with its cost. However, to the extent that it was required to provide a supply of water to the general consumers in Maine equal to that furnished to New Hampshire consumers of the same class, its cost had to be considered in determining the just and reasonable rates which the New Hampshire consumers should pay. *Re Fryeburg Water Co. 115 A2d 420.*

Commission Jurisdiction over Rates Continues Despite Pending Appeal of Earlier Rate Case

THE New York Telephone Company applied to the New York commission for an increase in rates, and the city of New York sought by its own application to have them reduced. The two matters were heard concurrently.

At the close of the company's direct case, opposing parties requested the commission to dismiss the proceeding on the ground that the commission had no power at that time to entertain an application for a change in rates, because there was then before the courts an appeal from a previous decision of the commission relating to the company's rates (5 PUR3d 33).

The commission expressed the opinion, however, that it has complete jurisdiction at all times over rates regardless of pending proceedings. If this were not true, said the commission, the city's application for a reduction in rates would have to be dismissed as well as the company's petition for an increase. It was further pointed out that if the commission were deprived of jurisdiction to act at any time, unconscionable rates might be maintained in effect simply by taking frivolous appeals from state commission orders. *Re New York Teleph. Co. Case 17352, August 30, 1955.*

Telephone Exchange Boundaries Maintained in Rejecting Outside Service Request

A COMPLAINANT before the Missouri commission sought an order requiring a telephone company to provide him with service through the exchange in a neighboring exchange area to which he was closely attached by social and eco-

nomic ties. While his home was barely outside the area in which he desired service and the same company served both areas, the commission, nevertheless, denied the request.

The commission declared, in effect, that telephone companies must of necessity have definite exchange boundaries and that management has a right to establish them, provided only that they be reasonable. The reason for changing a boundary line or requiring a company to provide service from one exchange to a person residing in the area of another exchange must be more than a mere desire of someone to have the change made.

There must be a showing, said the commission, that the location of the existing line is arbitrary and unreasonable and results in undue discrimination. It must be shown that the change is economically feasible and convenient for the company, that it will eliminate existing discrimination, and that it will not result in further undue discrimination. *Smith et al. v. Warrensburg Exchange of United Teleph. Co. of Missouri. Case No. 13,134, August 9, 1955.*

Natural Gas Rate Increase Reaffirmed

THE Montana commission affirmed its previous decision (1 PUR3d 167), authorizing the Montana Power Company to increase natural gas rates. The earlier order had been attacked in the courts, and under a statute providing that when additional evidence is produced in court, the entire record will be returned to the commission for further consideration, the commission conducted the re-examination. It found that under the new rates the company had earned in the 12-month period ending June 30, 1954, a rate of return of 5.46 per cent. This was too low and the rates were considered fair to customers.

The commission recognized that a natural gas company should have a rate of return of between 6 and 7 per cent. The Montana statutes do not require the commission to fix any rate of return, but authorize it to ascertain property value and to establish reasonable rates. As a general rule, the commission has found what the rate of return to a particular utility under particular rates would be. The commission does not believe that it should bind itself to any fixed and definite percentage as a fair rate of return. It observed that this is the practice followed by the Federal Power Commission and the vast majority of regulatory commissions in the United States.

Discriminatory Rate Preference

The company serves the Anaconda Company under a contract. It earns a greater return from that company than from its general customers. This fact, according to the commission, showed that in actual operation the rates were not discriminatory to the general gas users and afforded no preference to the Anaconda Company. *Re Montana Power Co. Docket No. 4068, Order No. 2395-A, August 2, 1955.*

Maps and Agreement Fail to Fix Service Area

THE Missouri commission dismissed a telephone company's complaint against another company's extending its lines into what was claimed to be an ex-

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clusive territory. The company's principal claim was that it had filed an exchange boundary map with the commission covering the territory in question. The commission ruled that such a filing in and of itself is not sufficient to establish an exclusive right. In the case at hand the filing was even less effective because the predecessor in interest to the claimed invader had already filed for the same territory.

Oral Agreement between Managers

A further claim that a territorial agreement between the managers of the two companies assigned the territory to the complainant was overruled. The commission found that the agreement was never reduced to writing, was to be effective only when the presidents of each company approved it (such approval was never obtained), and was never submitted for commission approval or information. Such an agreement could not be considered as relieving the company already serving the area from its obligation to continue to do so or establish an exclusive right in the territory. *United Teleph. Co. of Mo. v. Southwestern Bell Teleph. Co. Case No. 12,926, July 22, 1955*

Unmetered Blanket Water Rates Held Discriminatory

THE Wisconsin commission ruled that the unmetered annual charges of an unincorporated town operating a water public utility were discriminatory and unreasonable because of inadequacy, since they were applied without more regard to the amount of water actually consumed than was afforded by a general classification of customers chiefly only as to residential, business, and manufacturing uses. Free service, also, was being provided for a number of public needs. A new and more comprehensive schedule of rates was prescribed, taking account of the various kinds of water fixtures used by customers and including reasonable charges for all public uses. *Swedberg et al. v. Town of Winter, 2-U-4413, August 18, 1955.*

Order Granting Carrier Certificate Reversed for Want of Evidence

UPON the issuance of an order by the Maine commission authorizing a common carrier to extend his operations into the intrastate business of another common carrier, the latter, as intervener in the case, taking exceptions to the findings and order, obtained judicial review. The supreme court of Maine sustained the exceptions.

It appears that the applicant before the commission offered little information about his proposed service other than the fact that he desired a certificate. He did, however, present several witnesses who testified, in effect, that the new service might afford a somewhat more expeditious delivery service on occasional small shipments.

But no complaints were shown to have been made with respect to the adequacy of the intervener's existing service. Other testimony concerning the advantages of the proposed service was extremely vague.

While the applicant's service would likely afford some convenience to a few indi-

viduals, the court was unable to discover any substantial evidence in the record which could form the basis of the commission's finding that the public convenience and necessity required the proposed new service. The convenience and necessity here concerned, said the court, pertain to the public and not merely to some individual or group of individuals. Concluding that the commission had erred in granting the requested authority, the court remanded the case for a new decree denying the application. *Re Chapman, 116 A2d 130.*

City Denied Power to Prohibit Interstate Transportation of Explosives over Streets

Two interstate motor carriers brought actions in the United States district court to enjoin the enforcement of a resolution of the city of Omaha which prohibited the transportation of explosives over the streets of the city. An injunction was duly granted.

The carriers were authorized by the Interstate Commerce Commission to transport explosives over certain routes which included Omaha. While the regulations of the commission provide that carriers shall avoid congested places "so far as practicable, and where feasible," the carriers here concerned could not reasonably avoid Omaha. Consequently, the court considered the resolution to be, in effect, a partial suspension of the federally granted certificate.

It was pointed out that the regulations of the Interstate Commerce Commission were not intended to preclude states or cities from passing safety laws where compliance with such laws would not frustrate compliance with the federal laws and regulations. But in the present case, said the court, the local law and the federal regulations were incompatible. *Watson Bros. Transp. Co. et al. v. City of Omaha 132 F Supp 6.*

Tank Truck Water Service Denied Public Utility Status

A New Mexico corporation, engaged in the business of supplying water by tank trucks to well-drilling rigs, was denied a certificate of public convenience and necessity authorizing it to operate as a public utility water company. The New Mexico commission ruled that it had no jurisdiction over the operations of the corporation.

The corporation owned and operated wells and equipment and sold approximately 90,000 gallons of water a day to the well drillers. The company did not serve any customers by pipeline. There were no other significant purchasers of water in the area.

The area of operations of the company was continually changing as new wells were being drilled, and it appeared that the nature of the service rendered was more or less temporary. The commission pointed out, moreover, that the operations of the applicant might well fall within the purview of the state motor carrier laws. On the basis of all of these facts taken together, the commission decided that the business did not constitute a public utility.

Actual Operations Determinative

In support of its application, the corporation put in evidence the statute un-

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der which it was incorporated conferring authority to supply water for public uses. The commission said that such incorporation did not establish its tank truck business as a public utility operation. Whether the corporation is or is not a public utility, said the commission, is determined not by its powers, but by its actual operations.

The Proposed Pipeline

Actually, the real purpose of the application was to submit the applicant to the jurisdiction of the commission in order to obtain authority to construct a pipeline across private lands, as to which easements could not be secured from the owners. The proposed pipeline was intended to reduce the distance of the tank-truck hauls by several miles and thereby effect a considerable saving in transportation expense.

But since the purpose of the pipeline was thus merely to facilitate tank-truck operations, which were found to be a private and not a public service, and since there were no other users of water in the area to be served by the proposed new facilities, the commission concluded that the pipeline would serve only the same private use as the tank trucks then supplied and was not, therefore, required by public convenience and necessity. Authority to construct the pipeline as a public utility was for these reasons withheld.

Power of Eminent Domain

The applicant asserted that regardless of the commission's decision upon the application, the power of eminent domain was, nevertheless, lodged in the possession of the corporation by virtue of the statute under which it was incorporated. While the commission conceded that no issue of eminent domain was before it in this proceeding, it merely observed, in passing, that that power could be granted and exercised only for public uses.

But since the operations of the corporation were here held to be for private use, the commission indicated that if its holding should become final and the applicant should seek to exercise the power of eminent domain to condemn land needed for the laying of the proposed pipeline, then it might become necessary to obtain a judicial ruling as to the effect of the decision in this proceeding upon the asserted right of the corporation to exercise the power for the contemplated purpose. *Re Kirby (J. J.) and Sons, Inc. Case No. 442, August 24, 1955.*

Municipal Water Utility Must Extend Service

After a municipal water utility had refused to extend service to a resident living in an area located outside the city, he petitioned the Wisconsin commission for relief.

The utility was furnishing service to other customers located outside the city, some in the same area as the applicant. The commission noted that in the past it had ruled that an obligation of service can be acquired in either one of three ways: (a) by acquiring an indeterminate permit; (b) by express contract to serve; and (c) by the doing of acts from which an intention to serve may be inferred. Since the utility had held itself out to supply service in the area outside the limits of the city, the applicant was entitled to an extension of service.

The city had passed an ordinance prohibiting lateral servicing of any property outside municipal limits. Irrespective of whether the ordinance was a proper one, the commission held, the city council could

not limit the scope of service of the utility or reduce the obligation to serve in an area in which the utility already had an obligation of service. No abandonment or discontinuance could be effected without prior approval of the commission. *Stillman v. City of Oshkosh, 2-U-4427, September 2, 1955.*

Commission Lacks Jurisdiction over Competition by Electric Company with Co-operatives

THE Idaho commission dismissed the complaint of four electric co-operatives against the Washington Water Power Company on the ground that it lacked jurisdiction over the matter. The co-operatives had asked the commission to order the company to cease and desist from "encroaching, aggrandizing, and pirating" into territories and areas served by them. They also sought an order requiring the company to discontinue service to the consumers and former members previously taken by the company from the co-operatives and to restore the same to the latter. The company was also asked to remove its poles and transmission lines paralleling and duplicating those of the four electric co-operatives in their service territories.

The commission held that the co-operatives are not public utilities and are specifically exempt from its jurisdiction. Consequently, it concluded that it had no authority or jurisdiction to entertain the complaint. *Clearwater Power Co. et al. v. Washington Water Power Co. Case No. U-1008-11, Order No. 3444, August 29, 1955.*

Expense Claim for Transit Company's Payment to Affiliate for Management Reduced

THE California commission authorized a transit company to increase fares after the company had shown that substantial operating losses would result from present fares, notwithstanding extensive efforts to promote traffic.

The commission's staff had arrived at lower expense estimates than the applicant had. The amount claimed by the company for management expense represented payments to an affiliated company for services provided under a management contract. The payments were based on a percentage of the transit company's gross revenues. In return the company claimed it received centralized management, low-cost purchasing, standardization of equipment, of materials, and of methods, and the supervisory services of a higher caliber of employees than would be possible for the company to obtain by itself.

The commission did not think that the payments made by the company represented reasonable outlays for the services received. First, payments based upon percentages of gross revenue, said the commission, bear no necessary relationship to either the cost or the value of the management services. Second, the implied mass purchasing power of the affiliate appeared to the commission to be derived primarily from the applicant's own operations, that the applicant attained little advantage, if any, over and above what was available through the utilization of its own resources. Third, the volume of the payments in relation to the cost of the services made the commission conclude

that a large portion of the benefits arising from the arrangement unjustifiably flowed to the affiliate through the payments instead of remaining with the applicant. For these reasons, the proposed allowance for management expense was reduced.

Depreciation Expense

The depreciation expense charged by the company was based on a policy of computing charges on an 8-year service life for vehicles. The commission's engineer based his calculations on service lives of ten to twelve years.

What constitutes a reasonable and proper charge to depreciation expense for rate-making purposes, said the commission, is a matter to be determined largely by what is done rather than by what allegedly is desirable. The company, in seeking to apply depreciation rates based on an 8-year period, was in effect undertaking to charge its patrons for a standard of service which it was not providing. A depreciation expense estimate reflecting the actualities of the company's operations was thought to be more reasonable.

Claim for Contingencies

The company had sought to have included as an operating expense an allowance for contingencies which might lessen the revenues or increase expenses. The company cited variations due to regulatory lag; possible increases in the cost of labor, materials, or taxes; possible decreases in traffic below the anticipated level; and possible work stoppages, such as strikes, as necessitating the need for such an allowance. The commission refused to make allowance for such contingencies, reiterating a previous position that it would not allow for increases on the basis of expense adjustments which were speculative. *Re San Diego Transit System et al. Decision No. 51947, Application Nos. 36945, 37142, September 6, 1955.*

Engineer's Testimony in Exhibit Form Admitted in Electric Rate Proceeding

THE Federal Power Commission reversed a decision of a presiding examiner excluding certain engineering testimony in an electric rate case. The Georgia commission, which objected to the proposed rates, offered an exhibit prepared by its chief engineer in regard to the return and rate base of the electric company.

The company objected to the admission of the exhibit on the ground that the testimony was opinion evidence; that the witness was not qualified; that the exhibit was not really evidence but was a lawyer's brief, and that the witness having been recorded as a lawyer in the case, had disqualified himself from appearing as an expert witness. The presiding examiner agreed with the company.

The commission found that the testimony of the chief engineer, who was also a member of the Georgia bar, was relevant and material upon the Georgia commission's theory of the case. The testimony, even in exhibit form, should have been admitted so the commission would have before it all the evidence in support of the state commission's contention. The federal commission did not rule directly on the technical objections to the testimony but noted that strict rules of evidence are not applicable to such proceedings. *Re South Carolina Generating Co. Docket No. E-6585, August 23, 1955.*

Universal Water Metering Program Upheld

THE Pennsylvania supreme court was called upon to determine the validity of Philadelphia's universal water metering program. The city's regulation provided that meters were to be installed at the consumers' expense, the actual setting to be performed by the water department. Metered users and licensed plumbers sought to restrain the city from carrying into effect the metering program.

The court noted that a water meter, when annexed to the supply system, gives the water department dominion, possession, and control of the meter. Therefore, notwithstanding that the cost of installation was to be charged to the consumer, the consumer's freedom to contract with the supplier of his choice was not impaired. The city itself was doing the contracting for portions of its own system.

The court also was of the opinion that there was no deprivation of property without due process of law merely because the regulation provided for the pooling and interchanging of meters by turning in those needing repair and receiving others from the city water department, since the meters belonged to the city and not to the consumers.

The fact that persons who had already installed meters on their premises did not have the advantage of securing meters on the same terms offered by the regulation did not render such regulation discriminatory.

Neither did the fact that large consumers would receive large meters and small consumers small ones, where the charges for such meters would be reflected in the water rates.

A proposed deferred payment plan for the meter installation, and a provision for reimbursement of the city by the consumer for preliminary work, was not considered a lending by the city of its credit to the water consumer but was held to be, at most, a method of extending credit to the consumer in a transaction between the consumer and the city. A constitutional provision forbidding a city to lend credit to private individuals, said the court, is designed to prevent the city from becoming indebted as a guarantor or endorser for the benefit of any individual, but does not prohibit reasonable collection arrangements with debtors. *Vitacolonna et al. v. City of Philadelphia et al. 115 A2d 178.*

Abandonment of Steam-heating Service Conditioned on Construction of Propane Facilities

THE Illinois commission approved an electric company's application to discontinue steam-heating service subject to certain conditions imposed to protect existing customers. The steam service had been initiated and continued as a by-product of the company's electric generating operation. The growth of the service area had caused the company's generating plant to become inadequate. Power could be purchased for less than it could be generated. The company indicated that eventually the plant in question would be operating as a stand-by or reserve unit and then finally abandoned entirely.

Substitution of Gas Service

The company successfully demonstrated, by using engineering studies, that abandonment of the steam-heating operation was the most practical and econom-

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ical procedure to be followed. The commission, however, was concerned over the plight of the present steam customers because the gas company in the area did not have sufficient facilities to render adequate service to them at all times. A condition was attached to the approval of the application which required the company to construct propane storage and send-out facilities so that the gas space-heating service of the former steam customers would be adequate. *Re Central Illinois Light Co., Re Northern Illinois Gas Co. No. 41946, August 17, 1955.*

Destination Carrier Not Held to Special Rate Contract of Forwarding Carrier

THE United States district court has denied recovery by the federal government of a claim against a destination motor carrier for an overcharge collected by him in behalf of a forwarding carrier.

Contract and Shipment

A contract between the government and the forwarding carrier provided for special rates in accordance with § 22 of the Interstate Commerce Act. The destination carrier, who was neither party to, nor had notice of, this contract, accepted a government shipment from the forwarding carrier and carried the shipment to its destination.

He then collected the legally published charges for the transportation and in good faith paid the forwarding carrier his proportionate part, which included a sum amounting to $69.71 over the amount due under the terms of the contract.

The government contended that since the money was paid to the destination carrier as agent for the forwarding carrier, the former should be responsible for refunding the money. But the court thought otherwise. It pointed out that "§ 22 contracts" are permissible, merely, and not mandatory, and in the absence of some agreement on the part of a destination carrier, or at least without some showing that he has notice of such contracts when handling shipments, he cannot be bound by their terms. Nor can he be held liable on the bare relationship of principal and agent where his agency is disclosed and he acts in good faith and without notice.

The court found no basis for applying the theory of estoppel. Under the circumstances shown, said the court, the legally published rates were properly applied, as far as the collecting carrier was concerned. *United States v. Bethke, 132 F Supp 22.*

Other Recent Rulings

Electric Utility Sold. The New Mexico commission has authorized an electric company to sell its plant and facilities to a co-operative association, where the transaction would involve no interruption of service to the selling company's existing customers and no increase in rates would result, where the sale was a step towards eventual dissolution of the company and the cash received from the transaction would be sufficient to retire fully the company's current and accrued liabilities. *Re Frontier Power Co. Case No. 450, August 10, 1955.*

Administrative Remedies Not Exhausted. The United States district court held that a shipper, alleging discrimination because of an Interstate Commerce Commission order permitting increased railroad freight rates for certain commodities, was required to exhaust its administrative remedies under the Interstate Commerce Act by challenging the railroad's filed rates before starting a court action to have the order set aside and annulled. *Koppers Co., Inc. v. United States, 132 F Supp 159.*

Motor Carrier Certificate Properly Issued. The Georgia supreme court held that the commission had not abused its discretion in granting a certificate to a motor common carrier, where the objecting carrier had not contested the granting of the certificate, but had merely sought restrictions on the certificate forbidding interchange at one of the cities with another carrier operating on another route in competition with the objecting carrier. *Atlanta Motor Lines, Inc. v. Georgia Pub. Service Commission, 88 SE2d 387.*

Year-end Rate Base. The Florida commission considered a return of 7 per cent on a year-end rate base reasonable for a telephone company, although it had previously found that the same company was entitled to earn a return of 8 per cent on an average investment rate base. *Re Quincy Teleph. Co. Docket No. 3858-TP, Order No. 2206, June 30, 1955.*

Contract for Sale of Gas for Resale. A contract between two gas companies for the sale of natural gas for resale was approved by the California commission with the understanding that the agreement represented only a working arrangement between the parties and not a recognition by the commission of any right of one of the companies to limit the territory in which the other might retail gas purchased from it, or the quantity which might be sold to any interruptible customer. *Re Pacific Gas & E. Co. Decision No. 51915, Application No. 37101, September 6, 1955.*

Year-end Rate Base. The Wisconsin commission, in authorizing a telephone company to increase rates to yield a return of not more than 6.24 per cent, reduced the company's rate base on the theory that it was overstated because end-of-the-year figures, rather than average figures, were used. *Re Monroe County Teleph. Co. 2-U-4416, July 29, 1955.*

Revenues Not Sole Factor. An application for authority to change an open agency station to a prepaid station with custodian in charge, held the Missouri commission, should not be decided solely by a showing that the revenues at the station are out of proportion to the expenses of maintaining the station. *Re Chicago, B. & Q. R. Co. Case No. 13,039, August 30, 1955.*

Water Company Return Allowance. A return of 6.3 per cent was considered reasonable for a water company by the Missouri commission. *Re Duenweg Water Works, Case Nos. 12,866, 12,962, August 8, 1955.*

Discrimination Prohibition. The United States district court ruled that a statute prohibiting a carrier from giving undue or unreasonable preference or advantage to any shipper entity was intended to prevent a carrier from giving preferences or advantages over which it had control, but did not apply to a situation where comparison of preferences and advantages or prejudices and disadvantages was between entities located on lines of different car-

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riers not acting in concert or collusion. *Union Pacific R. Co. v. United States, 132 F Supp 72.*

Motor Carrier Request Unsupported. The Colorado commission denied a territorial extension of authority to a motor carrier on the ground that the carrier made no affirmative showing of a need for the proposed service based on the inadequacy of existing motor carrier service. *Re Finch (F. S. F. Truck Line) Application No. 13585-PP, Decision No. 44559, September 1, 1955.*

Customer Witnesses Lacking. A vigorously protested private carrier application was denied by the Colorado commission since the applicant, though offering some contradictory evidence, failed to present any customer witnesses in support of his application. *Re McLaughlin (Pueblo Transfer Service) Application No. 13484-PP, Decision No. 44447, July 28, 1955.*

Telephone Company Return. A small telephone company, upon converting to automatic dial operation, was authorized by the Georgia commission to increase its rates to a point that would afford a rate of return of 6.45 per cent, which was not considered excessive. *Re Sikes Teleph. Co. File No. 19456, Docket No. 807-U, August 4, 1955.*

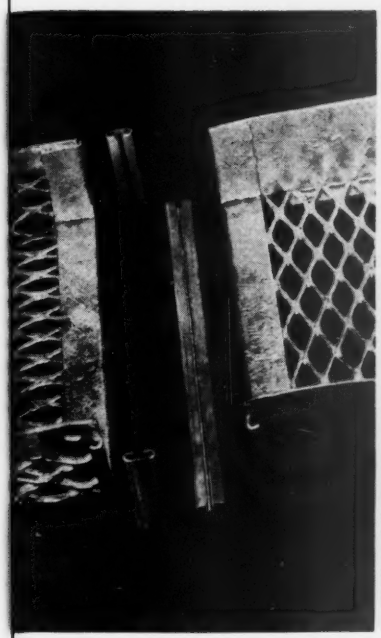
Gas Company Return. The Georgia commission granted a natural gas utility a flat rate increase for residential and commercial service sufficient to raise its rate of return to 6½ per cent but ruled, in determining the rate base, that the cost of service should not include sinking-fund payments in addition to a reasonable return on capital and a reasonable depreciation expense. *Re South Atlantic Gas Co. File No. 19440, Docket No. 826-U, July 5, 1955.*

Transit Return. A transit company's return of 4.10 per cent in its investment in property actually used in rendering service to the public was not considered adequate by the Missouri commission, particularly in view of the need for making reservation out of income for contingencies, and a fare increase was allowed. *Re Kansas City Pub. Service Co. Case No. 13,151, July 20, 1955.*

Minimum Water Rates. The Missouri commission, in granting a certificate to a new water company, authorized higher minimum charges than those proposed by the company to yield sufficient revenues to meet all of the company's operating expenses, including interest on its debt and an allowance for depreciation, and, in doing so, the commission said that the company was in its infancy and if time and experience should show that it could reasonably meet its necessary expenses and have sufficient earnings remaining to pay the shareholders a return on their investment at a lower minimum rate, it would adjust the rates to reflect the company's operating experience. *Re Pevely Water Co. Case No. 13,143, July 21, 1955.*

Water Utility Jurisdiction. The New Mexico commission granted an application for a water utility certificate after ruling that the applicant, upon commencing to take delivery of out-of-state water at the state line for use in serving a town within the state, thereupon became subject, as a public utility, to the jurisdiction of the state commission. *Re Sanderson (Percy Sanderson Waterworks) Case No. 446, September 14, 1955.*

New 'Wedgit' Fittings add speed and ease to Delta-Star UNI-TRAY CABLE-WAY installation



● Here you see 'Wedgit' Fittings—simplified aluminum clamps that join one Uni-Tray Cable-Way section to another. No bolts, pins or hinges.

● Light tap of a hammer puts the 'Wedgit' Fittings in place. Joint assembly time reduced by about 75% — total installation by about 40%.

● The assembled UNI-TRAY CABLE-WAY with 'Wedgit' Fittings in place. Joints materially increase overall strength of the cableway.

'Wedgit' Fittings also increase UNI-TRAY CABLE-WAY strength by more than ½!

Now another improvement is added to UNI-TRAY CABLE-WAYS—Delta-Star's new 'Wedgit' Fittings.

Because joint assembly time is reduced by about 75%, total installation time is reduced by about 40%. Elimination of bolts, pins and hinges makes installation simple and easy.

The engineering principle of using clamps instead of bolts provides maximum fitting strength. In fact, the joints of your completed UNI-TRAY CABLE-WAY installation are actually *stronger* than the cableway! Also, positive spring tension holds the joints firmly and uniformly. The continuous 'Wedgit' contact area develops better electrical contact for ground currents than with other type joints.

UNI-TRAY CABLE-WAY with 'Wedgit' Fittings comes in all shapes—to make a complete "customized" installation. Covers are also provided if required. Sections are made of durable, non-corroding expanded metal—your choice of hot-dip galvanized steel or aluminum.

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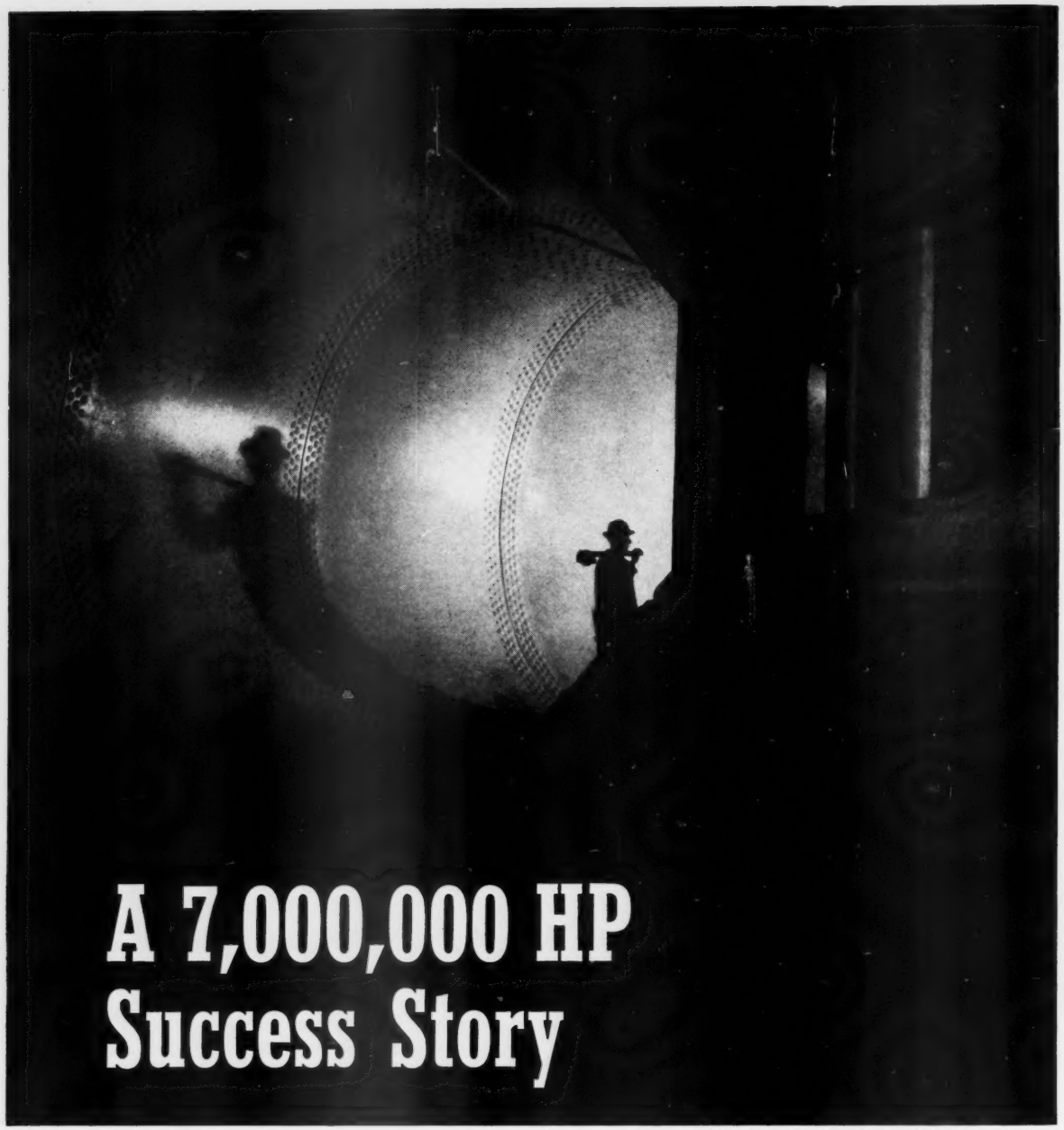

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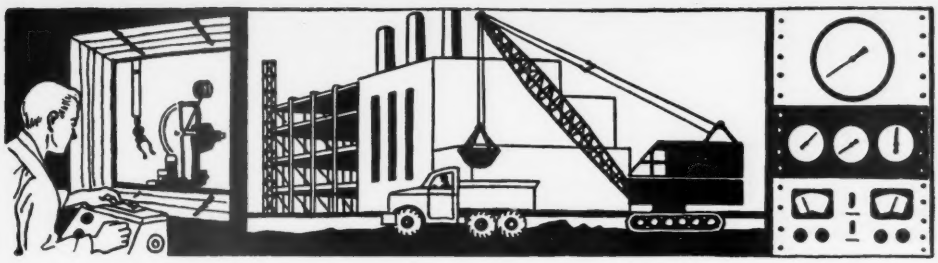

Industrial Progress

N. Y. Telephone Plans $1.75 Billion Program

THE New York Telephone Company expects to spend about $1.75 billion in construction in the next six years, barring a serious business slump, according to Russell H. Hughes, vice president.

Mr. Hughes said the company envisioned a $250 million construction program for 1956 and a program amounting to $275 to $300 million annually in the five years following. Most of the construction would be required because of demands for service. The company expects to add 400,000 telephones in 1956.

Over a five-year period, the company plans to add about two million phones.

Ebasco Forms Atomic Energy Division

F. C. GARDNER, president of Ebasco Services Incorporated, announced recently the addition of a nuclear engineering division to its engineering department. Mr. Gardner said that the company is prepared to render services on all phases of atomic energy applications to utility companies, industrial concerns, business enterprises and financial institutions.

Leonard F. C. Reichle, who has transferred to Ebasco from the post of assistant director of the Reactor Development Division of the U. S. Atomic Energy Commission, has been appointed nuclear engineering director.

Mr. Reichle has been with the AEC since 1947, of which the last five and one-half years were in the Division of Reactor Development. His duties have included the coördination of programs for the development of large power reactors for electric utility and industrial applications. He has also had several years' experience in connection with electric power system operations.

Walter F. Friend, who has been actively engaged in the nuclear activities of the company, will continue as nuclear engineer. He has been active in the more important technical and industrial organizations dealing with atomic energy, and with the founding of the American Nuclear Society of which he is a member of the executive committee and board of directors.

Within the Ebasco organization, atomic energy will be in the consulting engineering department along with the electrical, mechanical, civil, gas and general divisions under Howard L. Melvin, chief consulting engineer.

Columbus & So. Ohio Elec. Plans New Office Building

PLANS for the construction of a nine-story office building by Columbus and Southern Ohio Electric Company, Columbus, Ohio, were announced recently by J. B. Poston, president.

The new building costing $5 and ¾ million will be located adjacent to the company's present office building. Major construction work will begin in December of this year and will be completed in April of 1957.

Rochester G. & E. Plans 5-Year, $100 Million Program of Expansion

ROCHESTER Gas & Electric Corporation will spend more than $100 million over the next five years in a record construction program for the company.

According to Alexander M. Beebee, president, the expansion is needed because the area faces "spectacular developments that will greatly aid in expanding the civic, industrial, commercial and residential activity of the community."

Robert E. Ginna, executive vice president, said major projects in the expansion program include important additions to generating capacity, modernization of plants and substations, new lines and reinforcements.

General Electric Active on Atomic Applications

EXPERIENCE gained in construction and operation of one of the world's largest atomic power plants will lead to power reactors with higher temperatures and pressures, thus providing increased operational efficiency, a General Electric Company atomic expert predicted.

O. B. Falls, Jr., Manager — Marketing for the G-E Atomic Power Equipment Department, told the recent Atomic Industrial Forum held in Washington, D. C., that experience gained in connection with the construction and operation of the Commonwealth Edison Company atomic power plant reactor may permit tripling pressure used in later models.

G. E. will build the 180,000-kilowatt Commonwealth Edison plant for a contract price of $45 million. The plant, one of the largest all-nuclear power stations yet scheduled, may be completed by 1960, the G-E atomic expert said.

Called the Dresden station, this project also is being sponsored by the Nuclear Power Group, Inc., which includes, besides Commonwealth:

The American Gas and Electric Service Corporation, the Bechtel Corporation, Pacific Gas and Electric Company, Union Electric Company of Missouri, Kansas City Power & Light Company, Central Illinois Light Company and Illinois Power Company. Bechtel Corporation is engineer-constructor for the project.

The plant will be located 47 miles southwest of Chicago on the Illinois waterway.

Based on future operating experience, he predicted, "subsequent nuclear units may be even larger in capacity because much greater cost reductions

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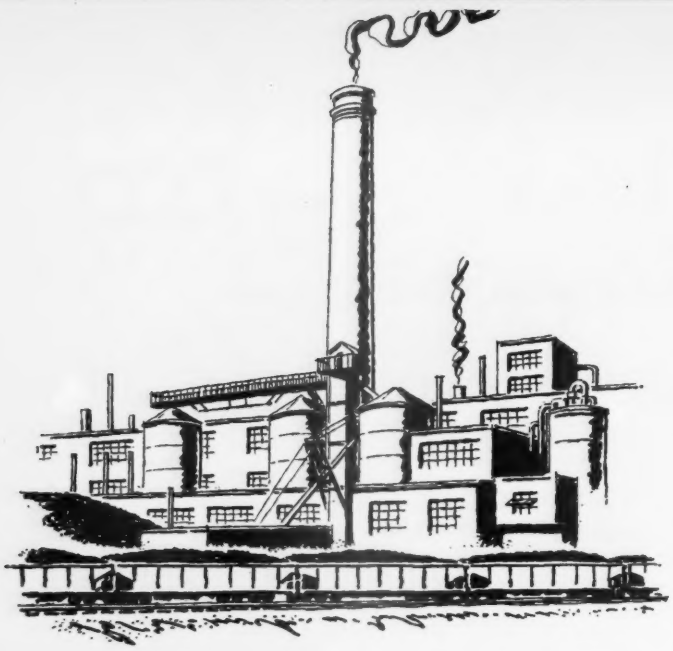

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can be realized from boosting the capacity of a reactor plant than that of a conventional plant."

Mr. Falls reported that the Dresden plant will be located on a 950-acre plot of farmland where the Kankakee river meets the Des Plaines river in Grundy county, Illinois.

Westinghouse Names P. T. Lagrone Manager of Electric Utility Sales

P. T. LAGRONE has been appointed manager of electric utility sales for Westinghouse Electric Corporation.

Mr. Lagrone succeeds C. V. Roseberry who recently was named manager of the newly-formed commercial atomic power department.

Battelle Pushes New Atomic Research

THE first of three major units in Battelle Institute's new atomic energy research center has just been completed. It is known as a "hot cell" laboratory and it is America's first of its capacity to be built without Federal funds.

The Atomic Energy Act of 1954 opened the way for private research on the development of peacetime uses of atomic energy. Battelle's atomic energy research center, when all units are completed, will provide $3.5 million worth of facilities available to both industry and government for such research.

A power reactor development (critical assembly) laboratory—the second unit at the new center—is scheduled for completion later this year at Battelle's 400-acre site just west of Columbus, Ohio. Construction of that building is well along, and the actual installation of equipment will begin in September. It is designed specifically for use by industry in the development of commercial power-generating plants.

The recently completed hot-cell laboratory has been designed and engineered for the safe handling of large quantities of highly radioactive materials. In it, studies will be made on the effects of radiation on materials used in nuclear reactors and on the handling and processing of nuclear fuels and other radioactive materials.

Dr. H. W. Russell, technical director and the Institute's senior physicist, has overall responsibility for the technical aspects of the Institute's nuclear energy research. Dr. H. R. Nelson, manager of Battelle's department of

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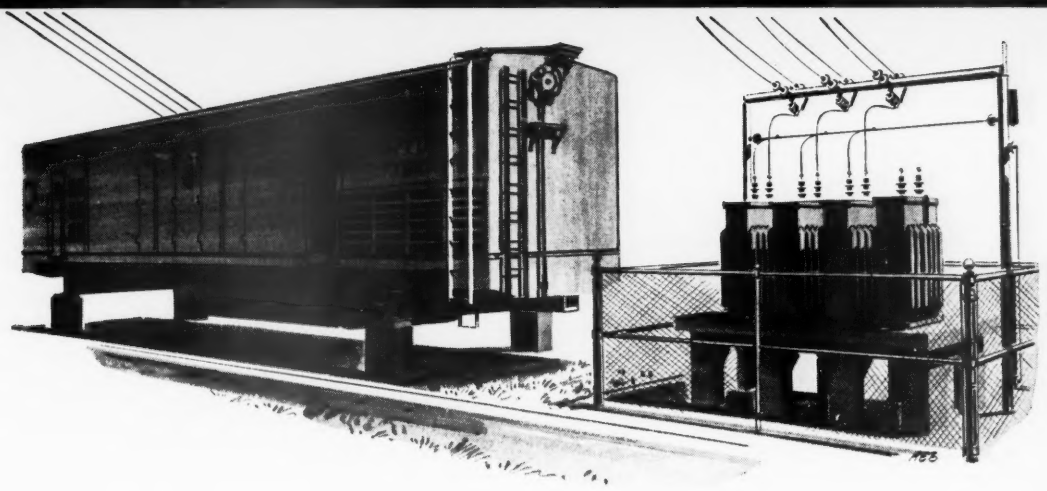

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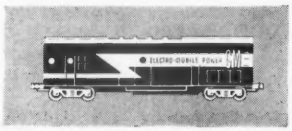

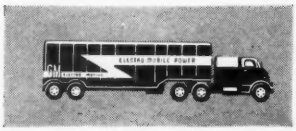

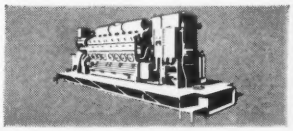

Sold and serviced directly through a manufacturer's organization. Electro-Motive Division offices located in: New York City, Chicago, Jacksonville, St. Louis and San Francisco. In Canada: GENERAL MOTORS DIESEL, LTD., London, Ontario.

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physics, has supervision of the new research center.

Dr. Sherwood L. Fawcett, chief of Battelle's engineering mechanics division, and Joel W. Chastain, Jr., assistant chief, will have supervision of the research reactor and the power reactor development laboratories. Battelle has been active in nuclear-energy research since 1941. It has been working in reactor fuel elements and materials research and development continuously for the past thirteen years. Direct work for the Atomic Energy Commission has been supplemented by related research for major AEC contractors, and by research for other governmental agencies.

Atlantic City Electric Plans New Unit for Deepwater Station

THE board of directors of Atlantic City Electric Company recently approved construction of an additional 75,000 kilowatt turbo-generating unit at Deepwater generating station. The additional unit to be completed in 1958 will raise the company's name plate capacity to 403,500 kilowatts.

Bayard L. England, company president, said the Deepwater extension was part of the company's plan of expanion to provide for growth in Southern New Jersey.

The new unit will rank among the most efficient turbo-generators in the country. It will consume over 600 tons of coal each day and steam will be heated to 1000 degrees Fahrenheit and fed through the turbine at a pressure of 1200 pounds per square inch. The turbo-generator will be rotated at the rate of 3600 revolutions every minute and the turbine blades will approach supersonic speed.

Waldo E. Caven, vice president in charge of engineering, announced that Gibbs and Hill, Inc. of New York City, have been selected as engineers for the project. The additional unit will be operated by existing boilers at the Deepwater plant.

A. H. Smith Elected Executive Vice President of Kerite

ARTHUR H. SMITH has been elected executive vice president of The Kerite Company by its board of directors, according to an announcement from the company. A veteran of more than 40 years in the railroad field, Mr. Smith is well known throughout this industry.

Mr. Smith joined Kerite in 1934 as a sales representative. Since then he has served successively as railroad sales manager in 1946 and vice president in 1948. He was made a director of the company in 1951.

(*Continued on page 32*)

This announcement is neither an offer to sell nor a solicitation of an offer to buy these securities. The offer is made only by the Prospectus.

New Issue

506,317 Shares

Central Maine Power Company

Common Stock, $10 par value

Holders of the Company's outstanding Common Stock and 6% Preferred Stock have been issued transferable Subscription Warrants to subscribe to the above stock and not exceeding 20,000 shares of such stock not so subscribed for will be offered to its employees. The Subscription Warrants and the offer to the employees will expire on October 19, 1955.

Subscription Price $24⅜ per share

During the subscription period the several Underwriters, including the undersigned, may offer and sell Common Stock, including stock purchased or to be purchased by them through the exercise of Subscription Warrants, at prices set by the Representatives of the Underwriters which prices shall be not less than the Subscription Price set forth above less any concession to dealers and not greater than the highest price at which a dealer not participating in this distribution is then offering the Common Stock of the Company to other dealers, plus the amount of any concession to dealers.

Copies of the Prospectus are obtainable from only such of the undersigned and such other dealers as may lawfully offer these securities in the respective States.

Harriman Ripley & Co. Incorporated — The First Boston Corporation — Coffin & Burr Incorporated

Goldman, Sachs & Co. — Kidder, Peabody & Co. — Lehman Brothers

Merrill Lynch, Pierce, Fenner & Beane — Union Securities Corporation

October 7, 1955.

Here's Proof of Performance...

Pressure-creosoting increases pole life for Consumers Power Company

• In 1931, Consumers Power Company, serving 64 Michigan counties, stopped the use of untreated and butt-treated poles in its rural distribution systems in favor of pressure-creosoted poles. Today approximately two-thirds of the company's poles in electric distribution lines are pressure treated, 80% of those being full length pressure-creosoted Southern Yellow Pine.

The average cedar pole, used until 1931, had a normal life expectancy of 23 to 25 years at the most. The life expectancy excluding losses for other than natural causes, of the pressure-creosoted Southern Yellow Pine poles being purchased today is probably upwards of 40 years, according to George A. Clark, Electric Distribution Supervisor.

Pressure-creosoting, according to Mr. Clark, gives positive penetration averaging over 80% of the sapwood and with the use of modern vacuum processes after treatment, today's poles are dryer and cleaner.

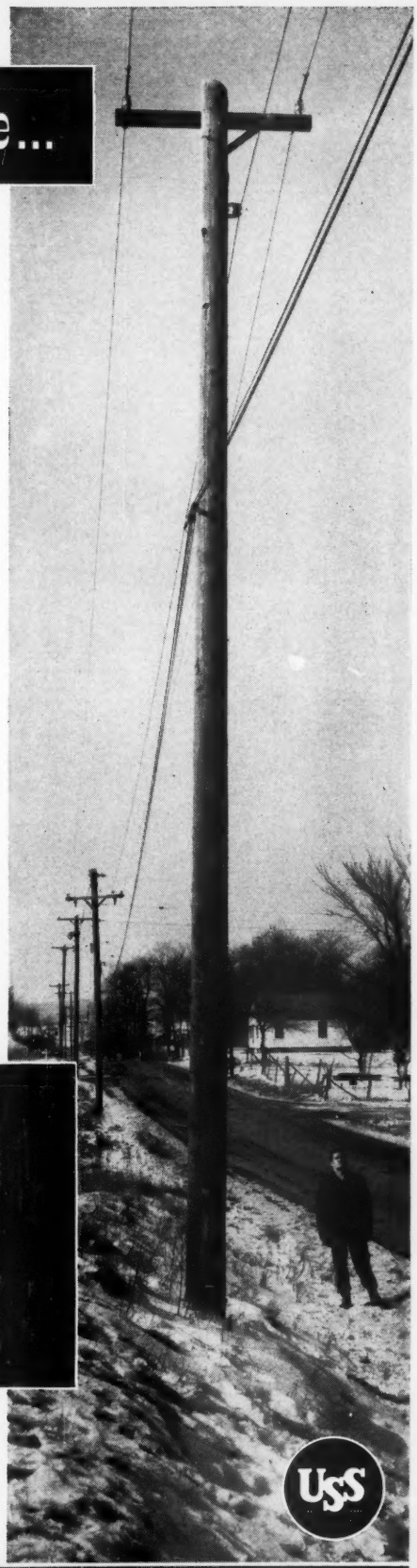
In the company's scheduled maintenance program, its full-length pressure-treated poles are not to be given a boring inspection until they have been in service 25 years.

Long life and cleanliness go hand in hand when you use pressure-creosoted poles. Especially if USS Creosote is used. If you would like more information, contact the nearest Coal Chemical sales office listed below or write directly to United States Steel Corporation, 525 William Penn Place, Pittsburgh 30, Pa.

You can obtain clean pressure-creosoted poles upon specification without sacrificing pole service life.

Close-up, at right, of a Consumers Power Pole, showing 1937 dating nail.

Pressure-creosoted poles in a rural line of Consumers Power Company, Jackson, Mich.



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CLEVELAND

INDUSTRIAL PROGRESS
(*Continued*)

IBM Reorganizes Electric Typewriter Division

INTERNATIONAL Business Machines Corporation announced recently that it is reorganizing its Electric Typewriter Division as a completely autonomous operation with an administrative structure separate from the other divisions of the company. The new plan becomes effective immediately. H. Wisner Miller, Jr., sales manager of the Electric Typewriter Division since 1947, will be general manager of the newly constituted division. He will have complete supervision of development engineering, manufacturing, sales and service activities. Henry W. Reis, Jr., assistant sales manager, has been promoted to sales manager, and Robert H. Rettew, administrative assistant to the IBM controller, has been promoted to controller of the new division.

According to the announcement, the reorganization of IBM's typewriter business was made necessary by its tremendous growth which has seen the division outgrow its previous administrative setup as well as available manufacturing space at the company's plant in Poughkeepsie, New York. IBM's revenue from typewriter sales, service and supplies has increased 400 per cent over 1946.

Koppers Names Don Smith Wood Preserving Division Sales Manager

DON C. SMITH has been named manager, sales department of the Wood Preserving Division, Koppers Company, Inc., it was announced by W. P. Arnold, vice president and general manager of the division.

Mr. Smith takes over the sales duties previously performed by Douglas Grymes, Jr., recently named a vice president and executive assistant to the division's general manager.

In his new position Mr. Smith will give assistance to the general manager of the division in the formulation of sales policies, procedures and systems covering all sales of the division. He will also have general staff supervision of sales personnel and sales activities of the districts, plus personal sales contacts with major accounts.

Atomic Industrial Forum, Inc. Issues Annual Report

THE Atomic Industrial Forum, Inc., in its 1955 annual report released re-

(*Continued on page* 34)

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Dodge pick-ups, stakes, panels cost up to $188 less than other popular makes

Save first, and always, with a Dodge truck! New low prices bring famous Dodge dependability within the reach of every truck owner. What's more, Dodge work-proved long life and low operating costs mean extra savings over the years.

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But see for yourself. Your dealer has a Dodge truck which will save you money and speed your work. See him today.

Models	Dodge saves you
½-TON PICK-UP	$14 to $ 94
½-TON PANEL	$18 to $123
¾-TON EXPRESS	$18 to $117
¾-TON STAKE	$39 to $137
1-TON EXPRESS	$63 to $157
1-TON STAKE	$97 to $188

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TRUCKS
WITH THE *FORWARD* LOOK

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cently, pointed to a nearly three-fold increase in membership during the past 14 months. The report noted that some 360 industrial, research, educational, labor and government organizations, which are either conducting or planning peacetime atomic energy activities, now comprise its membership.

Forum President Walker L. Cisler, also president of The Detroit Edison Company, said in releasing the report, "The continued and expanding interest in this new organization is graphic and conclusive proof of the rapidly mounting size and strength of the atomic industry." He also called attention to the addition to the Forum's roster of affiliate members in a dozen countries outside the United States.

The report was issued on the eve of the Forum's First Atomic Industrial Trade Fair held September 27 to 30, at the Sheraton Park Hotel in Washington, D. C. More than 80 representatives of industry, labor, education and government participated in fourteen separate panel discussions on such topics as power reactors, marketing atomic products and services, reactor safety, gearing up to atomic activities, AEC responsibilities in commercial developments, and fuels and source materials. Highlights of the three-day conference were addresses by AEC Chairman Lewis L. Strauss with a "Report on the Geneva Conference" and by Francis P. McCune of General Electric Company's Atomic Products division on "Business Opportunities in Atomic Energy." H. L. Price, director of AEC's civilian application division, spoke on licensing of power reactors.

Philadelphia Electric Honored For Contributions To Advancement Of Philadelphia Area

THE Philadelphia Electric Company —which has spent or will spend at least $750,000,000 for expansion of facilities between 1946 and 1959 at the rate of more than $1,000,000 a week—was honored recently by the Chamber of Commerce of Greater Philadelphia for its "many contributions to the economic and business progress" of the Philadelphia region.

The Chamber of Commerce especially hailed the company for its "consistent, colorful and long-continued advertising campaign calling world-wide attention to the advantages of this area."

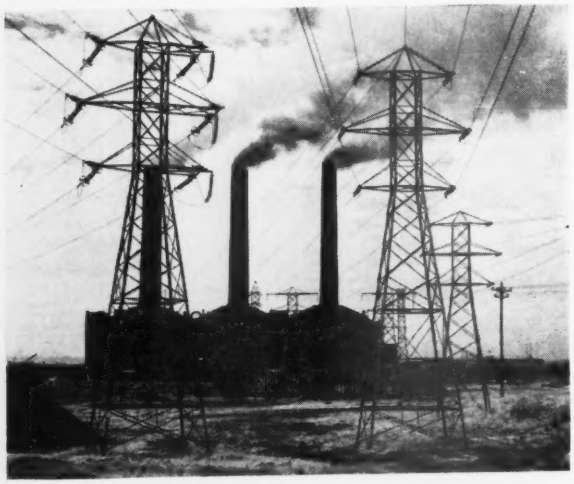
More than 250 top governmental, business and civic leaders of the City and the region gathered in the ballroom of the Warwick Hotel in Philadelphia for the tribute.

A handsome black and silver plaque was presented by Walter P. Miller, Jr., Chamber president, to Horace P. Liversidge and R. G. Rincliffe, chairman of the board, and president, respectively, of the company.

Ground Broken by Vepco For Multi-Million-Dollar Plant

CONSTRUCTION is expected to begin late this month on Virginia Electric and Power Company's multi-million-dollar steam power station in York County.

The initial unit of the station, which will cost between $22,000,000 and $28,000,000, will have a capacity of 160,000 kilowatts and will be the largest single generating unit in the company's system. It is designed for ultimate installation of three additional units of the same size, according to President J. G. Holtzclaw.



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STATEMENT OF THE OWNERSHIP, MANAGEMENT, AND CIRCULATION REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (39 U. S. C. 233) of Public Utilities Fortnightly published fortnightly at Baltimore, Maryland for October 1, 1955.

1. The names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher: Public Utilities Reports, Inc., Washington, D. C.

Editor-in-Chief: Ellsworth Nichols, Washington, D. C.
Editor: Francis X Welch, Washington, D. C.

Business manager: A. S. Hills, Washington, D. C.

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.) Public Utilities Reports, Inc., Washington, D. C.; George H. Blake, Newark, N. J.; William J. Hagenah, Glencoe, Ill.; Stuart M. Crocker, New York, N. Y.; George H. Clifford, New York, N. Y.; Harland C. Forbes, New York, N. Y.; Ernest R. Acker, Poughkeepsie, N. Y.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

PUBLIC UTILITIES REPORTS, INC.
A. S. Hills, Business Manager

Sworn to and subscribed before me this 19th day of September, 1955.

Josephine A. Olker
Notary Public

(My commission expires August 31, 1958)

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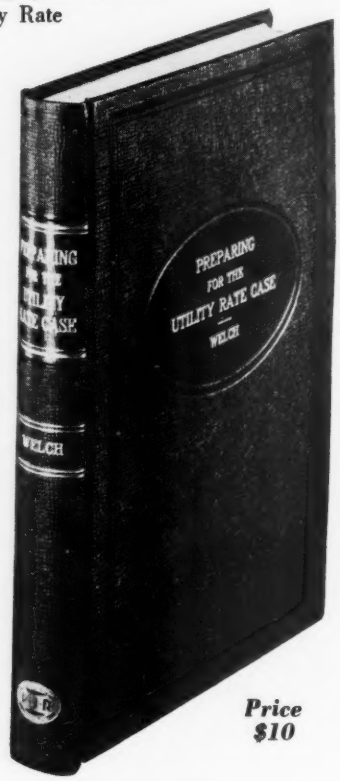

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The volume, being the first of its kind, should be found invaluable to ***utility executives, rate case personnel, attorneys, accountants, consultants, regulatory commissions, rate case protestants,*** and, in fact, to all persons engaged in or having an interest in rate cases.

Among the values of this compilation are the reviews of methods and procedures, which have been found helpful in—

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- **cutting down "lag losses"**
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The Birth of Utility Company Rate Opposition
The Grand Strategy of the Rate Case
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Completing the Rate Base: Working Capital
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Operating Expenses, Continued—Annual Depreciation
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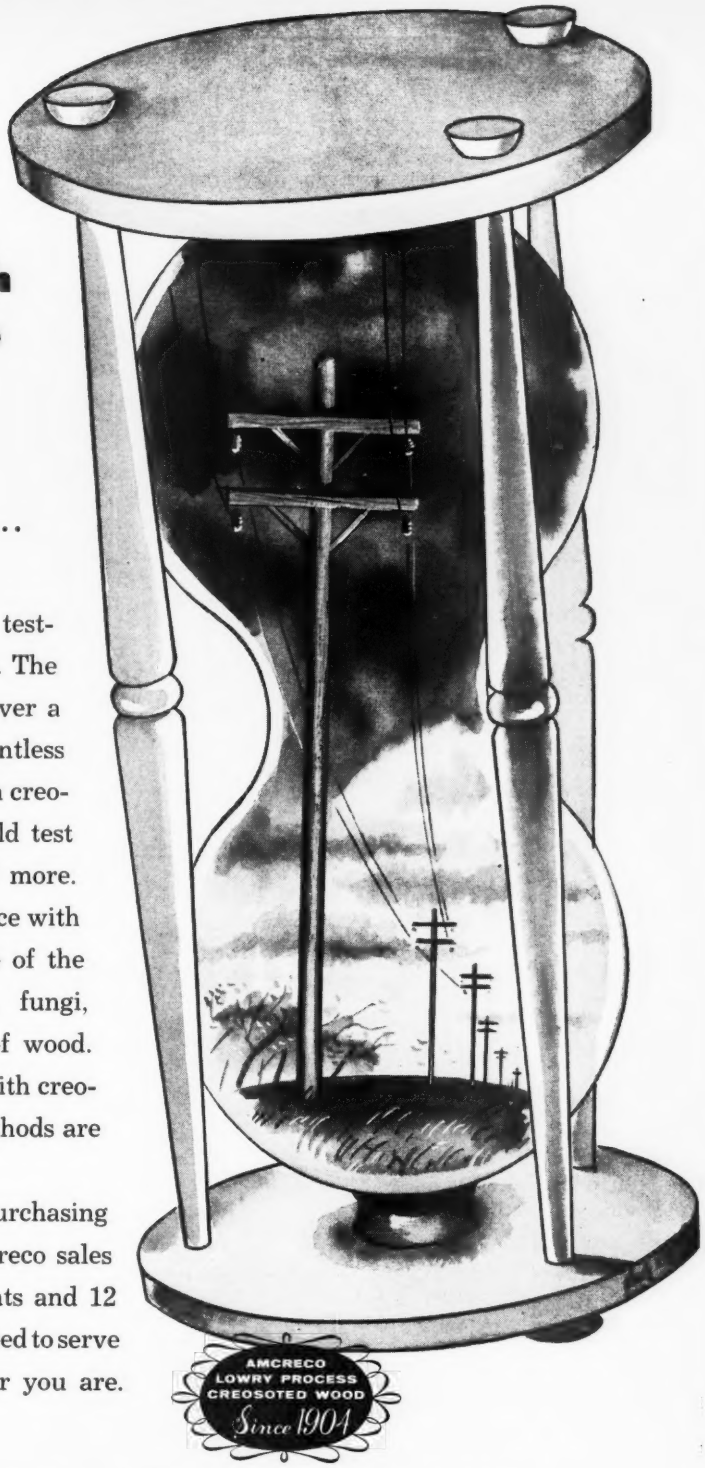

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Take the gamble out of pole purchasing by contacting your nearby Amcreco sales office on your next job. 23 plants and 12 sales offices are strategically located to serve your needs promptly, wherever you are.

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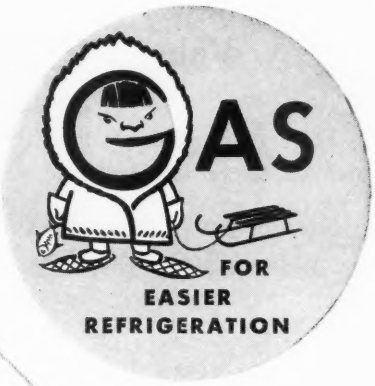

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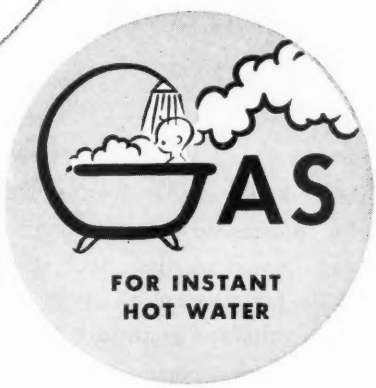

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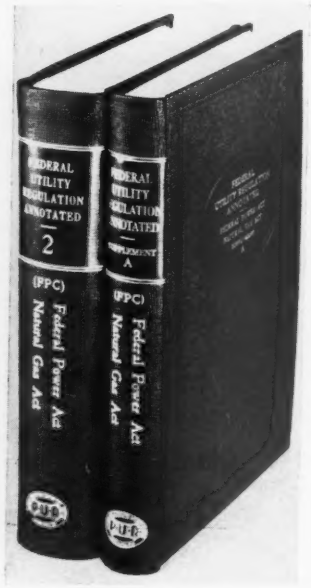
CHARLESTON GROUP: United Fuel Gas Company, Atlantic Seaboard Corporation, Amere Gas Utilities Company, Virginia Gas Distribution Corporation, Big Marsh Oil Company, Central Kentucky Natural Gas Company; **COLUMBUS GROUP:** The Ohio Fuel Gas Company; **PITTSBURGH GROUP:** The Manufacturers Light and Heat Company, Binghamton Gas Works, Cumberland and Allegheny Gas Company, Home Gas Company, The Keystone Gas Company, Inc., Natural Gas Company of West Virginia; **OIL GROUP:** The Preston Oil Company.

Federal Utility Regulation Annotated (FPC), Volume 2 With Supplement A

These volumes contain the only full annotation of the Federal Power Act and the Natural Gas Act, as administered by the Federal Power Commission.

Supplemental Volume A reports the activities of the Commission during the 10-year period subsequent to the publication of the original volume in 1943. All decisions in so-called "leading cases" have been made the subject of special editorial comment and interpretation.



Questions relating to the determination of the cost of projects, accounting, rate-base determinations, rates, service, granting of licenses, extent of the Commission's jurisdiction, definitions of what constitutes interstate commerce, return allowance (involving new views on cost of capital), the very controversial subject of cost allocation in the fixing of gas rates, and many other vital subjects are discussed. The decisions of the Commission and of the courts as well, in such important cases as the ***Mississippi River Fuel Corporation case,*** the ***Alabama-Tennessee Natural Gas Company case*** and the ***Colorado Interstate Gas Company case*** are explored at length in editors' notes.

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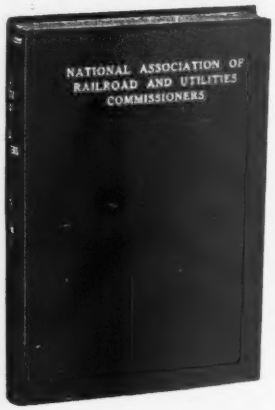

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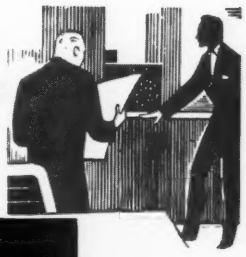

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